AD_____

Award Number: DAMD17-02-1-0390

TITLE: Impact of Culture on Breast Cancer Screening in Chinese American Women

PRINCIPAL INVESTIGATOR: Judy Huei-Yu Wang, Ph.D.

CONTRACTING ORGANIZATION: Georgetown University
Washington, DC 20007

REPORT DATE: September 2004

TYPE OF REPORT: Annual Summary

PREPARED FOR: U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Approved for Public Release;
Distribution Unlimited

The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 074-0188

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	September 2004	Annual Summary (1 Sep 2003 - 31 Aug 2004)

4. TITLE AND SUBTITLE
Impact of Culture on Breast Cancer Screening in Chinese American Women

5. FUNDING NUMBERS
DAMD17-02-1-0390

6. AUTHOR(S)
Judy Huei-Yu Wang, Ph.D.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Georgetown University
Washington, DC 20007

E-Mail: Jw235@georgetown.edu

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for Public Release; Distribution Unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 Words)

The purpose of this study is to develop and use culturally appropriate and stage-tailored Chinese language breast cancer brochures to promote older Chinese-American women's intentions to obtain mammography. A three-year research plan is designed to pursue this purpose. In Year 1, the brochures were developed and refined based on previous findings of cultural and language barriers to breast cancer screening in Chinese women. In Year 2, two-hundred and fifty Chinese women aged 50 and older in the Washington DC area completed a telephone interview regarding their previous screening experience, cultural views, and screening barriers. Participants were randomly assigned to either an intervention group with stage-tailored brochures or a control group with standard brochures. In Year 3, we will mail the appropriate set of materials to participants. Participants will receive a second interview regarding their opinions about the brochures and intention to screening. Descriptive analyses showed that there was no difference in demographics, cultural views, and screening barriers between the two groups. Multivariate analyses will be conducted in the third year to examine effects of brochure intervention. This project has successfully proceeded as scheduled. Preliminary results from the baseline data was reported in this report and have presented in national conferences.

14. SUBJECT TERMS
No subject terms provided.

15. NUMBER OF PAGES
151

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	Unlimited

Table of Contents

DOD Cancer Development Award
Year two progress report

Research title: Impact of culture on breast cancer screening in Chinese-American women

I. Introduction

Breast cancer is the most common cancer for Chinese-American women and is the second leading cause of death in this group.[1] Research has consistently shown that Chinese-American women have the lowest rate of mammography screening among minority and ethnic groups[2-5] and that Chinese-American women are more likely to be diagnosed with greater tumor size.[6-7] However, few studies have presented systematic understanding about how these barriers connect to screening and what type of intervention is effective in promoting screening within this population. To expand current limited knowledge about Chinese women and their intentions to get screening, the proposed study aims to investigate cultural and language barriers to breast cancer screening among Chinese women. We will also conduct a brochure intervention to promote breast cancer screening in this underserved population. The objectives of this study are threefold: 1) conduct a baseline interview with older Chinese women to identify cultural and language barriers to mammography screening; 2) develop culturally appropriate Chinese language educational materials targeted by stage of adoption; and 3) conduct a process evaluation of the potential impact of these tailored materials on screening intention in this under-studied population. Based on information from the baseline interview, we refined culturally tailored Chinese breast cancer brochures. A randomized trial in a sample of 250 Chinese women was conducted to assign participants to either read the culturally tailored brochures (intervention group) or read a simple fact sheet (control group). A post interview will be conducted to evaluate acceptability and effectiveness of the brochures on women's intention to be screened.

II. Body

The following outlines the progress made in the second year toward meeting objectives specified for the study. The specific aims of the study are as follows:

1. Use quantitative research methods to describe factors related to older Chinese women's breast cancer screening behaviors.

2. Develop and test culturally and stage-tailored educational materials designed to improve screening use in this population.

Progress Report September 1, 2003 – August 31, 2004

II.1 Task 3. Recruit participants and conduct baseline assessment (Months 7-24)

II.1.a Participant Recruitment. The recruitment was carried out in the first year of this project (months 7-12 from March to August 2003). In the first year, we obtained 150 women's consent forms and 80 baseline interviews were conducted. Eligible women are aged 50 and older, do not have a personal history of breast cancer, and reside in the Washington DC metropolitan area. In the second year, we continued our recruitment activities in Chinese communities in conjunction with the recruitment efforts of a large five-year project led by Dr. Wenchi Liang entitled "Impact of Culture on Cancer Screening" from the NCI KO7 award. With support from local Chinese community leaders, the researchers attended various community settings such as Chinese cultural service centers, senior centers, Chinese and Taiwanese associations, health fairs, churches, and Chinese New Year Celebrations to introduce this study. Chinese-language recruitment flyers were distributed at these events. Recruitment notices were also posted in Chinese newspapers and Chinese associations' newsletters and web sites. These materials were shown in the first progress report. After these public announcements, women were approached to evaluate eligibility in participation. Eligible women were invited to participate and were

told again about the purposes, procedures, benefits, and risk of participating in this study. We successfully recruited 572 eligible women to participate in our projects.

Of the 572, 509 (89%) consented to participate. Seventy-four percent of the participants recruited from Chinese churches, health fairs, senior centers, and Chinese associations' events held at restaurants; 16% were referred by friends; 8% brought consent forms home from the recruitment sites and mailed these back; and 2% called to enroll after learning of the study through notices in newsletters and newspapers. Of the 509, 438 (86%) completed the interview, 6% (n =18) declined the interview and 8% were pending in contact. Reasons provided for declining the interview after initially consenting included being no longer interested in participation (n = 15), moving out of the area (n = 7), lost contact (n = 4), too busy (n = 3), and negative feelings about questions on cancer (n = 3). A sample of 250 completed baseline data and were used for this current project.

II.1.b Baseline interview. We conducted baseline interviews upon receipt of consent forms. A computer assisted telephone interview (CATI) system was used to collect information regarding participants' demographic information, use of medical resources, cultural views about cancer and health, knowledge about cancer screening, and screening history. The measures used in this study are generally adopted from previous well-established items such as demographics, use of medical resources, knowledge, language, and screening history. The only exception was the measure of Chinese cultural views about cancer and health which was newly developed by Dr. Liang from her focus group data.[8] The baseline questionnaire is detailed in Appendix A. All survey questions were translated into Chinese. Bilingual speakers (English and Chinese) translated the instrument and back-translation was conducted to assure accuracy.

The cultural scale included 30 items with aspects of use of herbs, values of western medicine, fatalistic views of cancer, life styles, modesty, feelings about western medical examinations, other cultural ways of care (e.g. practices of Qi-kung or Tai-Chi), and traditional beliefs in hot-cold balance (hot-cold balance refers to beliefs about the nature of food containing two general characteristics: hot and cold. By balancing hot and cold foods, one obtains inner energy balance, which is thought to be critical to maintaining health, can be achieved). Women responded to each item from *strongly agree, agree, neutral, disagree*, to *strongly disagree*. This scale had been tested in a larger cohort of older Chinese women (n = 438) and had inter-item reliability at .80. Participants of this research were part of the cohort. A paper clearly described the development of the cultural scale was submitted under review (see Appendix B). The results of this paper were also presented in the 2004 annual meeting of American Society of Preventive Oncology.

Procedures. Consenting women were interviewed, with the PI and trained interviewers, mostly in Mandarin and Cantonese by using the CATI. Only two participants preferred to be interviewed in English. Eighteen participants who had difficulty in answering questions by telephone were interviewed in person. The baseline interview took about an hour on average. All data are stored in our secure servers in a confidential fashion. Participants were only identified by a unique ID number.

Preliminary results. Of the 250 participants, 249 were foreign born. Among the foreign born women, 60% were born in China, 3% in Hong Kong, 31% in Taiwan, and 6% in other countries including Singapore and Vietnam. The mean age of the sample was 64 years, ranging from 50 to 89 (standard deviation, SD = 9 years). The majority of participants had a college degree or higher (72%), had health insurance (82%), and were married (72%). Forty percent were employed. Twenty-two percent (n = 129) of the participants were classified as regular screeners, 34% (n = 85) were ever screeners, and 14% were never screened. Results from descriptive analyses indicated that women having never or ever screened were likely to be at age of 65 and older compared to women having regularly screened, 61%, 52%, and 30%, respectively, $p < .01$. These never or ever screened women also had lower educational levels compared to regularly screened women ($p < .0001$). Ninety-two to ninety-four percent of regular screeners reported having presence of a regular doctor and health insurance compared to 71-79 ever or 50-56% never screeners. Whereas 74% in the regular group reported receipt of

recommendations from their physicians, only 38% and 19% in the ever and never groups, respectively, had receipt of physician recommendation ($p < .0001$). Women in the never and ever groups encountered more barriers to access to medical services including transportation, language, either none or only partial insurance coverage, and long waiting time during doctor visit. These women were also more likely to have cultural barriers to obtain mammography. Never and ever screeners were likely to hold an eastern views of care ($p < .01$) and were less positive to cancer screening than their regularly screened peers ($p < .0001$). In addition, never screened women were less likely to worry about getting breast cancer (75%) compared to ever (68%) and regular (52%) screened women ($p < .04$). However, women in the three groups did not have significant differences in perception of risk of developing breast cancer ($p < .05$). These bivariate, preliminary results are summarized in Table 1 (see Appendix C). Inferential analysis of the baseline data will be immediately conducted in the beginning of the third year.

II.1.c Preparation of process evaluation and refinement of the survey instrument as needed. An eligible Chinese woman pilot tested the baseline survey. Based on the pilot test result and data from baseline interview in the first year (n = 80), some of the questions were reworded to fit with lay women's level of comprehension and common usage in daily life. Prior to administration of the baseline assessment, Dr. Jeanne Mandelblatt (the mentor of the P.I.), Dr. Liang, and the P.I. have also reviewed the survey questions. The IRB has approved the revision of the measurement. This has also been indicated in the first year progress report.

II.2 Task 4. Prepare educational intervention (Months 15-24)

II.2.a Ascertain the stage of adoption for distribution of materials. Based on responses to questions about history of mammography screening, we categorized stage of adoption of each participant along with the principals outlined by Rakowski and his colleges (1997).[9] The categorization was based on participants' intention, recent actions, and past actions as precontemplation, contemplation, action, maintenance, relapse risk, and relapse. For example, a woman who had never had a mammography was in the stage of precontemplation. A woman in the contemplation stage had never had mammography or had ever had mammography, but not recently screened (> 24 months) and had intention for future mammography screening. A relapse risk refers to the status of recently or regularly screened. Regular screening is defined by having a recent screening within the period of 24 months and having the prior mammography screening within the same period (< 24 months). The definition of stage of adoption is described in a table on the right.

Definition of stage of adoption

Adoption stage	Intention for future screening	Screening history			
		Never screened	Ever but not recently screened	Recently screened	Regularly screened
Precontemplation		X[a]			
Contemplation	X	X[a] or	X[b]		
Action	X			X[b]	
Maintenance	X			X[b]	X[c]
Relapse			X[b]		
Relapse risk				X[b] or	X[c]

Note: a= never, b=ever, c=regular

Based on information about the specific stages, we attributed participants to three general categories: never, ever, and regular. Never screeners pertain to precontemplation and contemplation (having never screened even if having future intention). Ever screeners include contemplation, action, and relapse. Regular screeners include women in the stages of relapse risk and maintenance. Women in the intervention group will receive an appropriate set of materials pertaining to never, ever, and regular brochures. Women in the control group will all receive a standard fact sheet. These materials had been detailed in the first year's progress report. Randomization was immediately conducted after collection of baseline data (see description in section II.2.d).

II.2.b Refine stage-tailored educational materials if necessary. The educational materials were not refined in the second year as the content of our intervention materials was consistent with information from baseline data such

as cultural and fatalistic views, lack of symptoms and health insurance, lack of knowledge about breast cancer and mammography, and negative attitudes toward mammography use.

II.2.c Produce standard and tailored educational materials. The 250 participants were randomized either to an intervention group with culturally and stage-tailored Chinese brochures or to a control group with a doubled-sided standard fact sheet. Thus, we produced a minimum of 125 color copies of the control and intervention materials for each group participant. The production of copies was supported from other related research projects (P.I.: Liang with funds from her NCI K07 award and a Komen research grant.). The projects led by Dr. Liang investigated the impact of culturally sensitive, linguistically appropriate, and staged-tailored brochure intervention on intention and behavior changes in breast, cervical, and colorectal cancer screening. Her research funds were shared to produce good quality materials through a paid printing service for this project. In conjunction with Dr. Liang's efforts in cancer prevention in Chinese American population, I have co-authored several abstracts that presented preliminary results of breast cancer baseline data in several national conferences (see Appendix D and Reportable outcomes, below).

II.2.d Randomization and descriptive analysis. Using computer-generated random numbers, participants who completed the baseline interview were randomly assigned to either the intervention group or the control group in a 1:1 ratio. By using descriptive statistics, we examined the success of randomization. As shown in Table 2, results from chi-square demonstrated that the randomization was successful since the distribution of the demographic characteristics was not significantly different between the two groups (see Appendix C).

II.2.e Finalize, translate, and pre-test the process evaluation interview questionnaire. We have also finalized the process evaluation interview questionnaire. The questionnaire focuses on evaluation of comprehensibility, acceptability, and popularity by participants (see details in the Appendix A). In addition, some of the questions used in the baseline interview were employed to investigate whether there are changes in intention to use mammography, cultural views of healthcare, knowledge, and attitudes toward mammography screening after intervention. This survey instrument was translated into Chinese languages following the same translation procedures used in the baseline survey (see section II.1.b. under procedures). We also pilot tested the questionnaire by age-appropriate women to ascertain the adequacy and comprehensibility of the translation.

II.2.f Create the CATI system for process evaluation interview. Our programmer had set up the post-intervention interview by the CATI system. Currently, it is in the testing phase to make sure the process of conducting standardized interviews with simultaneously data entry is consistent and being stored accurately in the MS Access database. The post-interview assessment involves open-ended questions. We will also examine whether the open-ended responses can be fully recorded in the database. The post-intervention interview will be started immediately after materials are mailed to the participants and after the participant read the materials.

III. Key Research Accomplishments

- Successfully recruited more than 250 eligible Chinese women to participate in this study
- Established a strong relationship with Chinese communities in the Metropolitan Washington DC area through recruitment activities
- Successfully collected 250 completed baseline data from consented Chinese women
- Ascertained participants' stages of adoption of mammography based on baseline data
- Produced three sets of culturally and stage-tailored materials (never, ever, and regular) for the intervention group as well as a simple fact sheet for the control group.
- Randomized the 250 participants who completed baseline interview to either the intervention group or the control group.
- Kept the data in a confidential fashion without connecting any personal information such as name, address, and telephone.

- Translated the post-interview questionnaire into Chinese language and pilot tested the accuracy and comprehensibility of the translation.
- Finalized the post-interview questionnaire that will be administered after intervention and received approval from the IRB.
- Created the CATI system for the post-interview and examined the consistency between interview and the directly stored data in the Access data base.

VI. Reportable Outcomes

- The P.I. has successfully co-presented two abstracts regarding cultural impact on breast cancer in meetings of the American Society of Preventive Oncology held in Bethesda, Maryland and the Intercultural Cancer Council held in Washington DC in March 2004. An abstract describing the relationships between language, culture, and mammography use will be presented in the annual meeting of American Public Health Association held in Washington DC in November, 2004. (Abstracts were included in Appendix D). This work was supported by this DOD award.

- The P.I also co-authored a manuscript describing the development of the cultural scale measuring Chinese Americans' views of health care, submitted to Preventive Medicine (see Appendix B).

- Based on baseline data, a grant proposal (Reducing disparities in breast cancer screening in Chinese American women) was submitted to the Susan G. Komen Breast Cancer Foundation in August 2004.

- The P.I. also has an opportunity to understand colorectal cancer screening behavior among older Chinese women during this DOD award period. The P.I has orally presented an abstract entitled "Cultural and attitudinal barriers to colorectal cancer screening among Chinese women in the biennial meeting of the Intercultural Cancer Council held in Washington DC in March 2004. A manuscript describing the influence of culture and cancer worry on colorectal cancer screening was submitted to Ethnicity and Disease (see Appendix E). Through this work, the P.I obtained deeper understanding about the relationship between culture and cancer screening among older Chinese women.

V. Conclusions

All the tasks proposed in year two of this project have been completed. Our preliminary analysis showed that among the 250 participants, only 49% regularly obtained mammography. This is a far lag behind our national goal to have 70% regular screening toward year 2010. Interventions designed to overcome barriers among Chinese women are in particularly important. Our post-intervention will be the primary task in the third year. After intervention, participants in both the intervention and control groups will be interviewed again via telephone to assess the effectiveness and acceptability of the Chinese breast cancer brochures targeted to their screening stage. Changes in intention to obtain recent mammography will be measured as a primary outcome of this study. It is also hypothesized that an increase in the intention to obtain a mammography is more likely to occur in the brochure intervention group than within in the control group. It is also hypothesized that Chinese women who are in the intervention group are more likely to have positive attitudes toward mammography screening and have less cultural barriers to obtain breast cancer screening than those who in the control group.

Multivariate analyses of the baseline data will be immediately conducted in the third year as well. Results from the baseline and intervention data will identify effective community-based education in promoting breast cancer screening in this understudied population. Through the project work in the first and second years, the P.I. has built up an extensive tie with community members and senior women and has strengthened her research skills via a randomized control trial and design of intervention programs. All of these are valuable for the P.I.'s future research plans and career development in becoming an independent cancer control scientist.

References

1. SEER web site. [online] Available: http://www.seer.ims.nci.nih.gov/About SEER.html

2. Lillie-Blanton M, Rushing OE, and Ruiz S. Race, ethnicity & medical care, 2003, Kaiser Family Foundation.

3. Kagawa-Singer M, and Pourat, N. 2000. Asian American and Pacific Islander breast and cervical carcinoma screening rates and healthy people 2000 objectives. *Cancer* 89(3): 696- 705.

4. Yu MY, Hong OS, and Seetoo AD. 2003. Uncovering factors contributing to under-utilization of breast cancer screening by Chinese and Korean women living in the United States. *Ethnicity & Disease* 13: 213-219.

5. Kagawa-Singer M, and Pourat N. 2000. Asian American and Pacific Islander breast and cervical carcinoma screening rates and healthy people 2000 objectives. *American Cancer Society* 89 (3): 696-705.

6. Hedeen AN, White E, and Taylor V. 1999. Ethnicity and birthplace in relation to tumor size and stage in Asian American women with breast cancer. *Am J. Public Health* 89(8): 1248-52.

7. Krieger N, Van Den Eeden SK, Zava D, Okamoto A. Race/ethnicity, social class, and prevalence of breast cancer prognostic biomarkers: A study of White, Black, and Asian women in the San Francisco Bay area. *Ethnicity & Disease* 1997; 7: 137-49.

8. Liang W, Yuan E, Mandelblatt JS, Pasick RJ. How do older Chinese women view health and cancer screening? Results from focus groups and implications for interventions. *Ethnicity and Health.* 2004;9(3): 283-304.

9 Rakowski W, Andersen MR, Stoddard AM, Urban N, Rimer BK, Lane DS et al. Confirmatory analysis of opinions regarding the pros and cons of mammography. *Health Psychol* 1997; 16 (5): 433-441.

Appendix A

Baseline and follow-up questionnaires

DRAFT

CANCER SCREENING AMONG OLDER CHINESE WOMEN
BASELINE SURVEY

Georgetown University

Subject ID# _____

Introduction

Hello, Mrs. [SUBJECT]. I am [INTERVIEWER], calling from Georgetown University for the project on Chinese American women's health. We are very glad that you are willing to participate in this project. This project involves three short telephone interviews over 2 years. This phone call is for the first interview. We will ask you for ideas about health, and some basic background information. You do not have to answer any questions that you are not comfortable with. This interview will last for about 30-40 minutes, and all the information you give us will be kept **confidential**. Do you have time now?

[If **NO**] May I set up an appointment with you to call you back for this interview?
[If **YES**, fill out the appointment date and time in the table on the next page.]
[If **NO**, go to REFUSAL questions below.]

[If **YES**] Do you have any questions before we start? [If **NO**, continue onto the next page.]

REMINDER: Code "777" for non-applicable questions; "888" for "Don't know/Unsure," and "999" for "Do not want to answer/Refusal."

REFUSAL:
Would you so kind as to tell me why you are not interested in this project? [Record verbatim]

RECODE→ Too busy.....01
Too ill.....02
Not interested.....03
Sounds too long.....04
Negative reaction to surveys.....05
Confidentiality.....06
Other (specify)_ _____.....07

Would you mind answering a few questions before we stop? [Ask Section I Questions 1, 3, 4, 6, 10 (bolded)]

Thank you for taking your time answering this question.

Telephone Call Tracking Sheet

Multiple tries:

Date	Time 1		Time 2		Time 3		Time 4		Interviewer
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	

B=Line busy; N=No answer.

Appointments:

Date	Time	Spoke with	Call back date	Call back time	Interviewer
/ /	Am/pm			am/pm	
/ /	Am/pm			am/pm	
/ /	am/pm			am/pm	

FINAL DISPOSITION: ____ (1-Completed; 2-Not able to contact; 3-Wrong number; 4-Refusal)

DATE: ____ / ____ / 20 _____

INTERVIEWER: _____

SECTION I Sociodemographics

[Demographics and length of US residence]
Now, I'm going to ask questions about yourself.

1. **What is your date of birth? _____**

2. Is this your western age or lunar age?
   - Western 01
   - Lunar 02

3. **In what country/area were you born?**
   - **U.S. (Skip to 6).....01**
   - **Taiwan.....02**
   - **Hong Kong.....03**
   - **China.....04**
   - **Singapore.....05**
   - **Other Asian country, Specify: _____ 06**
   - **Other non-Asian country, Specify: _____.....07**

4. **At what age did you come to the United States? _____**

5. How long have you been living in the Washington D.C. area?

6. **How far did you go in school?**

   - Never been to school.....01
   - Up to elementary school (Grade 1-6).....02
   - Middle school (Grade 7-9).....03
   - High school (Grade 10-12) 04
   - Some college or technical training school 05
   - College graduate 06
   - Graduate school 07
   - Don't know/Unsure.....888
   - Refused to answer.....999

7. Have you ever attended school in the U.S., excluding classes to learn English?

   - Yes 01
   - No (Skip to 8).....02

   7.1. That was for what level of education and for how long? [Check all that apply]

Educational Level	Yes	No	Length of attendance
7.1.a Elementary school			
7.1.b Middle school			
7.1.c High school			

7.1.d College or technical school			
7.1.e Graduate school			
7.1.f English language class			

8. Are you currently employed?

Yes 01
No (Skip to 9).....02
Refused to answer.....999

8.1 Is that a full time job?

Yes 01
No.....02
Refused to answer.....999

9. Are you retired, disabled, unemployed, or a homemaker?

Retired.....01
Disabled 02
Unemployed.....03
Homemaker.....04
Other_____ 05
Refused to answer.....999

10. What is your marital status?

Married 01
Separated/divorced 02
Widowed 03
Single, never married.....04
Living with an unmarried partner 05
Don't know/Unsure.....888
Refused to answer.....999

[Social support]

11. When you need assistance in transportation to see a doctor, how often can you find a person(s) to help you, such as relatives or friends?

Never 01
Seldom.....02
Sometimes.....03
Very often 04
Always 05
Not applicable 777
Don't know/Unsure..... ..888
Refused to answer.....999

12. When you need a translator during your doctor visit, how often can you find a person(s) to help you, such as relatives or friends?

Never.....01
Seldom.....02
Sometimes.....03
Very often.....04
Always.....05
Not applicable.....777
Don't know/Unsure.....888
Refused to answer.....999

13. If for some reasons, you lose your health insurance, who could you find to help you pay for your health insurance premiums and/or medical bill?

None.....01
Family members.....02
Relatives.....03
Friends.....04
Chinese community-based organizations.....05
Your county health department.....06
Other _____.....07
I won't look for help.....08
Don't know/Unsure.....888
Refused to answer.....999

14. How many times do you usually participate in religious activities in a month (i.e. going to church, temple, etc.)? _____ times

15. How much is spirituality and/or religion a source of strength and comfort to you? [*PORT*]

None.....01
A little bit.....02
Somewhat.....03
A great deal.....04
Don't know/Unsure.....888
Refused to answer.....999

16. Do you know any one of your relatives or friends who has had breast, cervical, or colorectal cancer? If yes, what kind of cancer have they had? [CHECK ALL THAT APPLY]

Yes, breast cancer.....01
Yes, cervical cancer.....02
Yes, colorectal cancer.....03

No, but having other cancer, SPECIFY: _____.....04
No.....05
Don't know/Unsure.....888
Refused to answer.....999

17. Have you ever been encouraged by relatives or friends to have

	Yes	No
17.1 General checkup (i.e. blood pressure, blood sugar, cholesterol)?	1	2
17.2 Mammogram?	1	2
17.3 Pap smear test?	1	2
17.4 Blood stool test?	1	2
17.5 Flexible sigmoidoscopy?	1	2
17.6 Colonoscopy?	1	2

[Income] (*Lee, 1996*)
I'm now going to ask about your income. We understand that it may be difficult to estimate income, or you may not be willing to report your income. However, we will only ask the income by range, not the exact amount. This income information will help us to understand the need for health care assistance in the Chinese community. Your information will be kept confidential.

18. Would you please tell me how much is the yearly income of members of your household for the last year? It includes wages, social security income, retirement benefits, unemployment benefits, welfare programs, etc.

Less than $5,000 01
$5,000 - $10,000 02
$10,001 - $20,000 03
$20,001 - $30,000 04
$30,001 - $40,000 05
$40,001 - $50,000 06
$50,001 or more 07
Don't know/Unsure.....888
Refused to answer.....999

18.1 How many people are supported by this income?

Number of people_____
Don't know/Unsure.....888
Refused to answer.....999

[Health insurance] (*Lee, 1996*)

19. Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMO (Health Maintenance Organization), or government plans such as Medicare and Medicaid?

Yes 01
No (Skip to Section II).....02
Don't know/Unsure.....888
Refused to answer.....999

19.1 What is your health care coverage?

Medicare 01
Medicaid 02
HMO 03
Private insurance.....04
Other_____ 05
Don't know/Unsure.....888
Refused to answer.....999

SECTION II Health Care Utilization and Referral

In this section, I will ask you questions about your experiences with health care and doctors you have seen.

1. In the past 12 months, how many times have you been to see a/an

	[Record verbatim] # of times
1.1 Western trained doctor?	
1.2 Herbalist?	
1.3 Acupuncturist?	
1.4 Acupressure therapist?	
1.5 Chi-Kung therapist?	
1.6 Other non-western practitioner?	

2. A regular personal doctor or nurse is the health professional who knows you best. This can be a general doctor, an internist, a family practitioner, a nurse practitioner, or a physician assistant. Do you have a doctor or nurse you usually see when you are sick or want a checkup?

   Yes 01
   No (Skip to 3).....02

   2.1 What kind of doctor (or clinic) is this? [READ LIST]

   Family or general practitioner 01
   Internist.....02
   Obstetrician/Gynecologist.....03
   Geriatrician 04
   Surgeon.....05
   Specialist (specify: _____) 06
   Herbalist 07
   Acupuncturist 08
   Accupressurist 09
   Qi-Kung therapist.....10
   Other.....11
   Don't know/Unsure.....888
   Refused to answer.....999

   2.2 Where is that doctor located? _____
   [RECODE]
   Public hospital (e.g. Montgomery General Hospital, Fairfax County Hospital, DC General Hospital, etc.) 01
   Private hospital (e.g. Shady Grove Hospital, Suburban Hospital, GU Hospital, Washington Hospital Center, etc.).....02
   Private doctor's office.....03
   Health department clinic 04
   Other, Specify: _____ 05
   Don't know/Unsure.....888
   Refused to answer.....999

2.3 How long have you been seeing that doctor?

Shorter than 1 year.....01
1-3 years.....02
3-5 year.....03
5-10 years.....04
Longer than 10 years.....05
Don't know/Unsure.....888
Refused to answer.....999

2.4 In the past two years, how often did you visit your regular doctor?

Several times in a month.....01
About once a month.....02
About once in every 2-4 months.....03
About once in every 5-8 months.....04
About once in every 9-11 months.....05
About once a year.....06
About once in 1 to 2 years.....07
I didn't keep regular appointments.....777
Don't know/Unsure.....888
Refused to answer.....999

2.5 Is that doctor a male or female doctor?

Male.....01
Female.....02

2.6 Is that doctor Chinese?

Yes.....01
No.....02

2.7 What kind of language does that doctor use when communicating with you?

English.....01
English, which is translated to Chinese for my understanding....02
Chinese.....03
Chinese, which is translated to English for my understanding....04
Other.....05

[SKIP TO 4]

3. Is there one particular clinic, health center, or doctor's office where you usually go for health care?

Yes.....01
No (Skip to 4).....02

3.1 Please tell me where this place is. _____

[RE-CODE]
Public hospital (e.g. Montgomery General Hospital, Fairfax County Hospital, DC General Hospital, etc.) 01
Private hospital (e.g. Shady Grove Hospital, Suburban Hospital, Georgetown University Hospital, Washington Hospital Center, etc.).....02
Private doctor's office.....03
Health department clinic.....04
Emergency room.....05
Other, Specify: _____.....06
Don't know/Unsure.....888
Refused to answer.....999

[Medical checkup]

4. Have you had general medical checkup, such as checking for blood pressure, blood sugar, or cholesterol, in the **past two years**?

Yes 01
No.....02
Don't know/ Unsure.....888
Refused to answer.....999

5. Did any of the doctors you visited during the past two years ever recommend you to get a cancer screening?

Yes 01
No 02

5.1 What kind of cancer screening they suggested? [CHECK ALL THAT APPLY]

Cancer	Yes	No
Breast	1	2
Cervical	1	2
Colorectal	1	2

5.2 How enthusiastic are the doctors about your getting a [SCREENING]? [*Fox, 1994*]

Cancer screening	Very enthusiastic	Somewhat enthusiastic	Neutral	Not very enthusiastic	Not enthusiastic at all
Mammography	1	2	3	4	5
Pap smear	1	2	3	4	5
FOBT	1	2	3	4	5
Sigmoidoscopy	1	2	3	4	5
Colonoscopy	1	2	3	4	5

[Access barriers]

6 Have you ever had the following problems when you need to get your medical care? [READ CATEGORIES]

	Yes	No
6.1 Lack of transportation	1	2
6.2 Difficulty in getting an appointment	1	2
6.3 Lack of a babysitter	1	2
6.4 No paid leave	1	2
6.5 No time	1	2
6.6 Language barrier (hard to find a doctor speaking Chinese)	1	2
6.7 No or only partial insurance coverage	1	2
6.8 Too much paperwork	1	2
6.9 Long waiting time	1	2

SECTION III Culture and Acculturation

[Cultural view]

1. The following set of statements about your ideas about health, medicine, and medical care. I'm going to read the following statements. Please tell me if you strongly agree, agree, disagree, strongly disagree, or are neutral to each of the statements. Remember, there are no right or wrong answers; we just want you to express your opinions.

Statements	SA	A	N	D	SD
1.1 Regular outdoor walking is essential to achieve good health.	1	2	3	4	5
1.2 Certain food is not good for me because it will disturb the hot-cold balance in my body.	1	2	3	4	5
1.3 Health or illness is a matter of fate. Some people are always healthy; others get sick very often.	1	2	3	4	5
1.4 It is hard to prevent cancer.	1	2	3	4	5
1.5 Eating "cold" food in summer and "hot" food in winter will help strengthen my body.	1	2	3	4	5
1.6 I know my body better than any one else.	1	2	3	4	5
1.7 It is best not to think about cancer. If we think about it too much, we probably will get cancer.	1	2	3	4	5
1.8 Most diseases, excluding external wounds, are caused by the imbalance between hot and cold in a person's body.	1	2	3	4	5
1.9 Eating food prepared by myself is a key to good health.	1	2	3	4	5
1.10 Getting Cancer is like being sentenced to death.	1	2	3	4	5
1.11 As long as I can take good care of myself and keep myself healthy, I don't need to see a doctor.	1	2	3	4	5
1.12 We should not take "western" medicine too often, because its chemical ingredients will hurt our bodies.	1	2	3	4	5
1.13 Herbs are more effective in harmonizing a person's yin-yang than western medicine.	1	2	3	4	5
1.14 If I am meant to get cancer, I will get it.	1	2	3	4	5
1.15 Bodily constitution is different for every person; therefore, some kinds of people are more likely to get cancer than others do.	1	2	3	4	5
1.16 Keeping my mind happy, doing my hobbies, and not competing with others can lead to better health.	1	2	3	4	5
1.17 I cannot control my destiny.	1	2	3	4	5
1.18 Herbs are a better choice for preventing diseases than western medicine.	1	2	3	4	5
1.19 Going to clinics or hospitals too often will cause me to catch diseases or having bad luck.	1	2	3	4	5
1.20 A lot of medical tests are too intrusive and make me uncomfortable.	1	2	3	4	5
1.21 If we get cancer, the best way to deal with it is to accept it, just like the old saying: "Listen to heaven and follow fate."	1	2	3	4	5
1.22 Western medicine is good for killing germs rather than preventing diseases.	1	2	3	4	5
1.23 I don't visit doctors if I'm not feeling sick.	1	2	3	4	5

1.24 Avoiding cancer is a matter of personal luck.	1	2	3	4	5
1.25 Herbs are better remedy for illness than western medicine.	1	2	3	4	5
1.26 Medical doctors usually do unnecessary tests.	1	2	3	4	5
1.27 Regularity in meals and daily schedules can make us healthy.	1	2	3	4	5
1.28 Qi-Kung or Tai-Chi practice can help regulate the "chi" in the body, which can increase one' stamina and prevent diseases.	1	2	3	4	5
1.29 No matter what I do, if I am going to get cancer, I will get it.	1	2	3	4	5
1.30 I will be embarrassed if a doctor or a nurse checks my private parts.	1	2	3	4	5

SA=Strongly agree; A=Agree; N=Neutral; DA=Disagree; SD=Strongly disagree.

[Acculturation] (*Anderson, 1993*)

2. The next few questions ask about your ability in using Chinese and English. Please let me know how well--very well, pretty well, just fine, not too well, or not at all--you are in each of the questions. How well are you in---

	Very well	Pretty well	Just fine	Not too well	Not at all
2.1 Understanding spoken English	1	2	3	4	5
2.2 Speaking English	1	2	3	4	5
2.3 Reading in English	1	2	3	4	5
2.4 Writing in English	1	2	3	4	5
2.5 Speaking Chinese (Mandarin, Cantonese, other)	1	2	3	4	5
2.6 Reading in Chinese	1	2	3	4	5
2.7 Writing in Chinese	1	2	3	4	5

3. What kind of language(s) do you usually use

	Only Chinese	Mostly Chinese	Chinese & English	Mostly English	Only English
3.1 With most of your friends	1	2	3	4	5
3.2 With most of your neighbors	1	2	3	4	5
3.3 At family gatherings	1	2	3	4	5

4. Think for a moment about your

	Only Chinese	Mostly Chinese	Chinese & Americans	Mostly Americans	Only Americans
4.1 Close friends you see nearly every day. You would say that they are…	1	2	3	4	5
4.2 Nearby neighbors you see nearly every day. You would say that they are…	1	2	3	4	5

SECTION IV Cancer Knowledge and Screening Experience

This section asks about your opinions about cancer and experiences with and opinions of several screening tests for breast, cervical, and colorectal cancers. I will describe each of the tests to you before asking questions about the test, so you can get familiar to what test we are talking about.

[Cancer knowledge] (*NHIS, 1992*)
1. Do you think [RISK FACTOR] is a risk factor for [CANCER NAME]?
[CIRCLE ONE RESPONSE]

Cancer	Increased age	High fat diet	Low fiber diet	Smoking	Family history	Exercise
Breast	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK
Cervical	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK
Colorectal	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK

[Code: Yes=1, No=0]

1.1 Do you think having multiple sexual partners is a risk factor for Cervical Cancer?

Yes.....01
No.....02
Don't know/Unsure.....888
Refused to answer.....999

[Perceived risk]
2. How likely do you think it is that you will get [CANCER NAME] in your lifetime? Do you think it is very unlikely, somewhat unlikely, somewhat likely, or very likely?

Cancer	Very Unlikely	Somewhat Unlikely	Somewhat Likely	Very Likely
Breast	1	2	3	4
Cervical	1	2	3	4
Colorectal	1	2	3	4

3. Compared to most women your age, what do you think the chances are that you will get [CANCER NAME] someday? Do you think your chances are much lower, somewhat lower, the same, somewhat higher, or much higher than most women your age?

Cancer	Much Lower	Somewhat Lower	The Same	Somewhat Higher	Much Higher
Breast	1	2	3	4	5
Cervical	1	2	3	4	5
Colorectal	1	2	3	4	5

[Worries and fear] (*Schwartz, 1995*)

4. Overall, how worried are you that you might get [CANCER NAME] someday? Would you say that you are:

Cancer	Not worried	Somewhat	Worried	Very worried
Breast	1	2	3	4
Cervical	1	2	3	4
Colorectal	1	2	3	4

5. During last year, how often have you thought about your own chances of getting [Cancer Name]? Would you say... [READ LIST]

Cancer	Not at all or rarely	Sometimes	Often	A lot
Breast	1	2	3	4
Cervical	1	2	3	4
Colorectal	1	2	3	4

[MAMMOGRAPHY]

6. Have you ever had a mammogram? To clarify, a mammogram is an x-ray taken of the breasts by a machine that squeezes the breasts. This x-ray takes a picture of the breasts to check for early breast cancer.

Yes 01
No (Skip to 7).....02
Don't know/ Unsure.....888
Refused to answer.....999

6.1 How many mammograms have you had since you were 50 years old?
_____ mammograms

6.2 When was your most recent mammogram?

Less than 1 year ago.....01
1 to 2 years ago 02
More than 2 years ago.....03
Don't know/ Unsure.....888
Refused to answer.....999

6.3 Did you go for your last mammogram because of a lump or specific breast problem, or for a routine checkup?

Routine checkup.....01
Health-related reason 02

6.4 When did you get another mammogram before this most recent mammogram?

Less than 1 year prior to my last mammogram.....01
1 to 2 years prior to my last mammogram 02
More than 2 years prior to my last mammogram.....03

I only had one mammogram before.....777
Don't know/ Unsure.....888
Refused to answer.....999

[Skip to 8]

7. Have you ever heard about mammograms?

Yes 01
No (skip to 8).....02

7.1 Why don't you go for a mammogram before? _____

8. How often do you think women your age should have a mammogram?

Once a year.....01
Every 1-2 years.....02
Other _____.....03
Don't know/Unsure.....888
Refused to answer.....999

9. Some women are planning to have a mammogram in the future and some women are not. Do you plan to have a mammogram in the next year?

Yes 01
No.....02
Don't know/Unsure.....888
Refused to answer.....999

[PAP SMEAR]

10. Have you ever had a Pap smear? To clarify, a Pap smear is a test in which you lie on a table with your feet in the stirrups, and the doctor or nurse examines the female internal organs by taking a swab of the cervix and sending a cell sample to the lab.

Yes 01
No (Skip to 11).....02

10.1 How many Pap smears have you had in your lifetime? _____ Pap smears
10.2 When was your most recent Pap smear?

Less than 1 year age.....01
1 to 3 years ago 02
More than 3 years ago.....03
Don't know/ Unsure.....888
Refused to answer.....999

10.3 Did you go for your last Pap smear because of a health-related reason (e.g. bleeding, pain, discharge, or infection), or as part of the routine checkup?

Routine checkup.....01

Health-related reason 02

10.4 When did you get another Pap smear before this most recent Pap smear?

Less than 1 year prior to my last Pap smear 01
1 to 2 years prior to my last Pap smear.....02
2 to 3 years prior to my Pap smear 03
More than 3 years prior to my Pap smear.....04
I only had one Pap smear before.....777
Don't know/ Unsure.....888
Refused to answer.....999

[Skip to 12]

11. Have you ever heard about Pap smear?

Yes 01
No (skip to 12).....02

11.1 Why don't you go for a Pap smear before? _____

12. How often do you think women your age should have a Pap smear?

Once a year.....01
Every 1-2 years.....02
Other.....03
Don't know/Unsure.....888
Refused to answer.....999

13. Some women are planning to have a Pap smear in the future and some women are not. Do you plan to have a Pap smear in the next 1-3 years?

Yes 01
No.....02
Don't know/Unsure.....888
Refused to answer.....999

[FOBT]

14. Have you ever had a blood stool test? The blood stool test checks for blood that one cannot see in the stools or bowel movement. There are two ways to do this. First, a doctor or nurse wearing a glove, puts a finger in a patient's rectum, and gets a stool sample, which is placed on a small slide. Or, instead, a patient can take samples from his/her stool after going to the bathroom, and put them on small cards provided by a doctor. After collecting 3 days of the stool samples, the patients return them to the doctor for testing.

Yes 01
No (Skip to 15).....02

14.1 How many blood stool tests have you had in your lifetime? _____ FOBTs

14.2 When was your most recent blood stool test?

Less than 1 year age.....01
1 to 2 years ago.....02
More than 2 years ago.....03
Don't know/ Unsure.....888
Refused to answer9.....999

14.3 Did you go for your last blood stool test because of a health-related reason, or as part of a routine checkup?

Routine checkup.....01
Health-related reason.....02

14.4 When did you get another blood stool test before this most recent blood stool test?

Less than 1 year prior to my last blood stool test.....01
1 to 2 years prior to my last blood stool test.....02
More than 2 years prior to my last blood stool test.....03
I only had one blood stool test before.....777
Don't know/ Unsure.....888
Refused to answer.....999

[Skip to 16]

15. Have you ever heard about a blood stool test?

Yes.....01
No (skip to 16).....02

15.1 Why don't you go for a blood stool test before? _____

16. How often do you think women your age should have a blood stool test?

Once a year.....01
Every 1-2 years.....02
Other.....03
Don't know/Unsure.....888
Refused to answer.....999

17. Some women are planning to have a blood stool test in the future and some women are not. Do you plan to have a blood stool test in the next year?

Yes.....01
No.....02
Don't know/Unsure.....888
Refused to answer.....999

[FLEXIBLE SIGMOIDOSCOPY]

18. Have you ever had a flexible sigmoidoscopy? To clarify, a flexible sigmoidoscopy is done by inserting a scope into your lower part of your colon to check for cancerous lesions.

Yes 01
No (Skip to 19) 02

18.1 When was your most recent flexible sigmoidoscopy?

Less than 1 year ago.....01
1 to 2 years ago 02
2 to 3 years ago 03
3 to 4 years ago 04
4 to 5 years ago 05
5 years ago 06
More than 5 years ago.....07
Don't know/Unsure.....888
Refused to answer.....999

18.2 Did you go for your last flexible sigmoidoscopy test because of a health-related reason, or as part of a routine checkup?

Routine checkup.....01
Health-related reason 02

[Skip to 20]

19. Have you ever heard about a flexible sigmoidoscopy?

Yes 01
No (skip to 20).....02

19.1 Why don't you go for a flexible sigmoidoscopy before?

_____

20. How often do you think women your age should have a flexible sigmoidoscopy?

Every 5 years 01
Other_____.....02
Don't know/Unsure.....888
Refused to answer.....999

21. Some women are planning to have a flexible sigmoidoscopy in the future and some women are not. Do you plan to have a flexible sigmoidoscopy in the next five years?

Yes 01
No.....02
Don't know/Unsure.....888
Refused to answer.....999

[COLONOSCOPY]

22. Have you ever had a colonoscopy? To clarify, a colonoscopy is done by inserting a scope into your colon to check for cancerous lesions. This test involves taking medicine so you have no pain. The tube looks at the whole colon, but sigmoidoscopy looks at the bottom half of the colon.

Yes 01
No (Skip to 23).....02

22.1 When was your most recent colonoscopy?

Within the last 10 years 01
More than 10 years ago 02
Don't know/Unsure.....888
Refused to answer.....999

22.2 Did you go for your last colonoscopy test because of a health-related reason, or as part of a routine checkup?

Routine checkup.....01
Health-related reason 02

[Skip to 24]

23. Have you ever heard about a colonoscopy?

Yes 01
No (skip to 24).....02

23.1 Why don't you go for a colonoscopy before? _____

24. How often do you think women your age should have a colonoscopy?

Every 10 years 01
Other_____.....02
Don't know/Unsure.....888
Refused to answer.....999

25. Some women are planning to have a colonoscopy in the future and some women are not. Do you plan to have a colonoscopy in the next ten years?

Yes 01
No.....02
Don't know/Unsure.....888
Refused to answer..... 999

26. The following statements are opinions about cancer screenings other women your age may have. Please tell me if you strongly agree, agree, disagree, strongly disagree, or are neutral to each of the statements. [*Rakowski, 1997*]

Statements	SA	A	N	DA	SD	Unknown
26.1 I would be more likely to go for cancer screening if my doctor told me how important it was.	1	2	3	4	5	6
26.2 Regular cancer screening gives you peace of mind about your health.	1	2	3	4	5	6
26.3 I worry that cancer screening has a high chance of leading to surgery that is not needed.	1	2	3	4	5	6
26.4 Cancer screening is necessary even when there is no history of cancer in a family.	1	2	3	4	5	6
26.5 I would probably not have cancer screening if my doctor seemed to doubt that I really needed one.	1	2	3	4	5	6
26.6 If cancer screening finds something, then whatever is there will be too far along to do anything.	1	2	3	4	5	6
26.7 If I eat a healthy diet, I will lower my risk of getting cancer far enough that I probably do not need to go for cancer screening.	1	2	3	4	5	6
26.8 Cancer screening is not important for a woman my age.	1	2	3	4	5	6
26.9 Once you have a couple of cancer screening results that are normal, you don't need to have any more for a few years.	1	2	3	4	5	6
26.10 I would probably not go for cancer screening unless I had some symptoms or discomfort.	1	2	3	4	5	6
26.11 Cancer screening finds cancer at a point when it is more likely to be cured.	1	2	3	4	5	6
26.12 Cancer screening is not as important as people say it is.	1	2	3	4	5	6
26.13 I would probably not have cancer screening unless I got a reminder from my doctor.	1	2	3	4	5	6
26.14 Having a mammogram every year or two will give me a feeling of control over my health.	1	2	3	4	5	6
26.15 If I have a breast exam from a doctor or nurse, I don't need to have a mammogram.	1	2	3	4	5	6
26.16 Mammograms are most helpful when you have one every year or two.	1	2	3	4	5	6
26.17 A Pap test can be done so quickly that it is not a bother to have one.	1	2	3	4	5	6
26.18 A Pap test can find a problem even before it develops into cancer.	1	2	3	4	5	6
26.19 Pap test results cannot be trusted because some labs that do the tests are better than others.	1	2	3	4	5	6
26.20 A Pap test is most helpful when you have one every year or two.	1	2	3	4	5	6
26.21 Women who reach menopause do not need Pap tests very often.	1	2	3	4	5	6
26.22 After women stop having children they do not need Pap tests.	1	2	3	4	5	6

26.23. A blood stool test involves a series of unpleasant procedures that I have to do myself.	1	2	3	4	5	6

SA=Strongly agree; A=Agree; N=Neutral; DA=Disagree; SD=Strongly disagree.

SECTION VI Smoking

1. Have you ever smoked before?
   Yes 01
   No [SKIP TO 2] 02

   1.1 Do you smoke now?
   Yes 01
   No [SKIP TO 2] 02

   1.2. Have you ever tried to quit smoking or thought about quitting smoking?
   I tried to quit smoking before 01
   I thought about quitting smoking before 02
   No 03

2. [Not including yourself], how many people smoke in your family? _____ persons

3. Who are they? [Check all that apply]

	YES	NO
Father	1	2
Mother	1	2
Husband	1	2
Sons	1	2
Daughters	1	2
Grandsons	1	2
Granddaughters	1	2

Other, Specify _____

4. Do you think that he/she/they would listen to you about getting information on ways to quit smoking?

Thank you very much for taking your time completing this survey. Your answers will provide valuable information about Chinese American women's health and health care. You will receive cancer educational materials we developed for you in 2-4 weeks. We will call you 1-2 weeks after you receive and read the materials to ask about your opinions about these materials. In addition, we will continue to mail you health-related information and contact you for a final interview in 1-2 years. Please tell me your contact information:

Name: _____

Address: _____

City _____ State _____ Zip_____

Telephone: ( ) _____

Could you tell us another one or two addresses and phone numbers of your relatives or friends who may know where you are if we cannot get hold of you?

PERSON 1:

Name: _____ Relationship: _____

Address: _____

City _____ State _____ Zip_____

Telephone: ( ) _____

It has been very pleasant talking to you. I will contact you in the next 1 to 2 months. If you have any questions regarding this study and your participation, please contact Ms. Mei-yu Chen at Georgetown University; her work number is (202) 687-0155. Thanks. Bye.

CANCER SCREENING AMONG OLDER CHINESE WOMEN
BASELINE SURVEY

喬治城大學

研究對象代號 # _____

前言

您好, [某某某] 女士。 我是[電話訪問員]從喬治城大學的華裔婦女健康研究計畫打電話給您。謝謝您願意來參加我們的研究。我們想要問您對於醫療經驗和保健的想法。這次電話訪談大概需要 30-40 分鐘的時間。您提供的資料都會被保密。請問您現在有空嗎？

[假如 **沒時間**] 我可以和您約別的時間進行訪談嗎？

[假如 **可以**, 在下一頁電話訪談追蹤表的表格中填妥下一次電話訪談的日期和時間。]

[假如 **不可以**, 跳到本問卷下方的**拒絕**欄。]

[假如 **有時間**] 在我們開始之前，您有沒有問題要問? [假如 **沒有**, 繼續下一頁.]

備註: 代碼 "777" 表示"這是不適用的問題"; "888" 表示 "不知道/不確定", 以及 "999" 表示 "不想回答/拒絕回答" 。

拒絕欄:

您可不可以告訴我為什麼您不想要參加這個研究嗎? [逐字記錄]

RECODE→

太忙了.....01
身體很不舒服.....02
沒有興趣.....03
覺得訪談時間太長了.....04
對做訪談有負面的反應.....05
個人隱私.....06
其他 (請註明)_____ 07

請問您願意回答下面幾個問題嗎? [問第一部份的問題 1, 3, 4, 6, 10 (粗體字)]

謝謝您撥空回答我們的問題。

Telephone Call Tracking Sheet

Multiple tries:

Date	Time 1		Time 2		Time 3		Time 4		Interviewer
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	

B=Line busy; N=No answer.

Appointments:

Date	Time	Spoke with	Call back date	Call back time	Interviewer
/ /	Am/pm			am/pm	
/ /	Am/pm			am/pm	
/ /	am/pm			am/pm	

FINAL DISPOSITION: ____ (1-Completed; 2-Not able to contact; 3-Wrong number; 4-Refusal)

DATE: ____ / ____ / 20 _____

INTERVIEWER: _____

第一部份　參加者基本資料

[個人基本資料和在美居留時間]
現在，我開始要問一些有關您個人的基本資料。

1.　您的出生年月日是? _____

2.　這是您國曆的生日，還是農曆的生日?

國曆.....01
農曆.....02

3.　您在那裡出生?

美國（請跳到第 5 題）..... 01
台灣..... 02
香港..... 03
中國大陸..... 04
新加坡..... 05
其它亞洲國家，請註明: _____..... 06
其它非亞洲國家，請註明: _____..... 07

4.　您幾歲時來到美國? _____ **歲**

5.　您在大華府地區住多久了?　　_____年

6.　您的教育程度?

從未上學.....01
小學（1-6 年級）.....02
中學/ 初中(7-9 年級).....03
高中（10-12 年級).....04
大學沒畢業或技職學校.....05
大學畢業.....06
研究所.....07
不知道/不確定.....888
不願回答.....999

7.　您曾經在美國的學校唸書嗎（不包括非英文教學的課程）

是.....01
否（跳到第 8 題）.....02

7.1. 是那一種學校的教育呢？您各花了幾年的時間? [請逐項填寫]

教育程度	是	否	就學的時間
7.1.a 小學			
7.1.b 中學/初中			
7.1.c 高中			
7.1.d 大學或技職學校			
7.1.e 研究所			
7.1.f 英語語文學校			

8. 您現在有上班嗎?

有.....01
沒有 (跳到第 9 題).....02
不願回答.....999

8.1 那是全職的工作嗎?

是.....01
不是.....02
不願回答.....999

9. 您是退休、殘障、沒有工作(失業)，或是家庭主婦呢?

退休.....01
殘障.....02
沒有工作(失業).....03
家庭主婦.....04
其它_____.....05
不願回答.....999

10. 您的婚姻狀況是?

已婚 01
分居/離婚..... 02
喪偶 03
單身,從未結過婚..... 04
不知道/不確定..... 888
不願回答 999

[社會支持]

11. 當您需要交通上的協助，帶您去看醫生時，您多常可以找到人幫忙？(諸如親戚，朋友)

找不到 01
很少 02
有時候 03
很多時候(都可以找到人幫忙) 04
每一次都可以找到人幫忙 05
不需要 777
不知道/不確定 888
不願回答 999

12. 當您看醫生需要一個人幫您翻譯英文時，您多常可以找到人幫忙？（諸如親戚，朋友）

找不到 01
很少 02
有時候 03
很多時候(都可以找到人幫忙) 04
每一次都可以找到人幫忙 05
不需要 777
不知道/不確定 888
不願回答 999

13. 假如因為某些原因， 您沒有了自己的健康保險， 您可以找到人幫您給付醫療或健康保險的費用嗎？ 這些人是 （可複選）

沒有人 01
家人 02
親戚 03
朋友 04
華人的社區社團 05
您所居住郡的健康部門 06
其他_____ 07
不會請人幫忙 777
不知道/不確定 888
不願回答 999

14. 您每個月通常會去參加多少次宗教活動? (譬如:上教堂,寺廟等等)?
每月 _____ 次

15. 您覺得精神上的寄託或是宗教可以給您支持或安慰的力量有多大? [*PORT*]

完全沒有.....01
一點點.....02
有一些.....03
很多.....04
不知道/不確定.....888
不願回答.....999

16. 您的親戚或朋友當中有沒有人曾經得過乳癌、子宮頸癌、或者是大腸直腸癌? 如果有的話, 她(她)們得的是那一種癌症 ? [可複選]

有, 乳癌.....01
有, 子宮頸癌.....02
有, 大腸直腸癌.....03
沒有, 但得過其它的癌症, 請註明: _____...04
沒有.....05
不知道/不確定.....888
不願回答.....999

17. 您的親戚或朋友曾經鼓勵您去做以下這些檢查嗎?

檢查項目	是	否
17.1 一般的健康檢查 (如:血壓, 血糖, 膽固醇)?	1	2
17.2 乳房攝影檢查?	1	2
17.3 子宮頸抹片檢查?	1	2
17.4 糞便潛血檢查?	1	2
17.5 軟式乙狀結腸鏡檢查?	1	2
17.6 大腸鏡檢查?	1	2

[收入] (*Lee, 1996*)
下面是有關您收入的問題。 您可能很困難告訴我們您的收入。 但我們只是需要問您的收入範圍而不是確實的金額。 這項資料可以幫助我們了解華人對健康照護補助上的需要。 您的資料絕對會被保密。

18. 請問去年您和您先生年收入大約是多少? 收入包括薪水 、社會安全補助 、退休金 、失業救濟金 、社會福利計畫等等。

少於 $5,000 元.....01
$5,000 - $10,000 元.....02

$10,001 - $20,000 元.....03
$20,001 - $30,000 元.....04
$30,001 - $40,000 元.....05
$40,001 - $50,000 元.....06
$50,001 元以上.....07
不知道/不確定.....888
不願回答.....999

18.1 這項收入可負擔多少人的生活費?(包括您和您先生的收入)

人數 _____ 人
不知道/不確定.....888
不願回答.....999

[醫療保險] (*Lee, 1996*)

19. 您有沒有任何醫療保險, 或是政府提供的福利, 像聯邦醫療保險(Medicare)以及低收入户/殘障者醫療保險(Medicaid)?

有.....01
沒有 (跳到 第二部份).....02
不知道/不確定.....888
不願回答.....999

19.1 您有那些醫療保險?

聯邦醫療保險(Medicare).....01
低收入户/殘障者醫療保險(Medicaid).....02
一般醫療保險組織(HMO)、PPO.....03
私人保險.....04
其他_____.....06
不知道/不確定.....888
不願回答.....999

第二部份　醫療資源的使用及轉介

在這部份，我將要請問您有關您健康照護以及看醫師的經驗。

1. 在過去的12個月當中,您曾經看過幾次(1.1-1.6)?

	[記下看醫師的次數]
1.1 西醫?	
1.2 中醫?	
1.3 針灸師?	
1.4 指壓按摩師?	
1.5 氣功治療師?	
1.6 其他的醫生?	

2. 當您生病或需要定期檢查時，您有沒有一位固定的醫師或護士?

有.....01
沒有（跳到第3題).....02

2.1 這是那一科的醫師（或診所)?[讀出選項]

家庭醫學科或一般開業醫師.....01
內科醫師.....02
婦產科/婦科.....03
老人科.....04
外科.....05
其他專科醫師（請註明: _____）..06
中醫師.....07
針灸治療師.....08
指壓按摩師.....09
氣功治療師.....10
其它.....11
不知道/不確定.....888
不願回答.....999

2.2 這位醫師在那裡替人看病? _____
[重新分類]
公立醫院 (e.g. Montgomery General Hospital, Fairfax County Hospital, DC General Hospital, etc.)...01
私立醫院 (e.g. Shady Grove Hospital, Suburban Hospital,GU Hospital, Washington Hospital Center,etc.).....02
私人的醫師診所.....03

衛生局的門診.....04
其他，請註明：_____.....05
不知道/不確定.....888
不願回答.....999

2.3 您看這位醫師有多久了?

少於1年.....01
1-3 年.....02
3-5 年.....03
5-10 年.....04
10 年或 10 年以上.....05
不知道/不確定.....888
不願回答.....999

2.4 在過去二年內，您多常去看您的固定醫師?

一個月內看好幾次.....01
大約一個月一次.....02
大約 2-4 個月看一次.....03
大約 5-8 個月看一次.....04
大約 9-11 個月看一次.....05
大約一年一次.....06
大約一到二年一次.....07
我沒有固定多久去一次.....777
不知道/不確定.....888
不願回答.....999

2.5 您的醫師是男性，還是女性?

男醫師.....01
女醫師.....02

2.6 這位醫師是華人嗎?

是.....01
不是.....02

2.7 這位醫師和您溝通時是使用那一種語言?

英文.....01
英文, 翻譯成中文讓我了解.....02
中文.....03
中文, 翻譯成英文讓我了解.....04
其他語言.....05

【跳到第 4 題】

3. 有沒有一個特別的診所,保健中心,或醫師診所,您通常會去那裡尋求健康照顧的?

有.....01
沒有 (跳到第 4 題).....02

3.1 請問那個地方是: _____

[重新分類]
公立醫院(e.g. Montgomery General Hospital, Fairfax County Hospital, DC General Hospital, etc.).....01
私立醫院 (e.g. Shady Grove Hospital, Suburban Hospital,Georgetown University Hospital, Washington Hospital Center, etc.).....02
私人醫師診所.....03
衛生局的診所.....04
急診室.....05
其他, 請註明: _____.....06
不知道/不確定.....888
不願回答.....999

[醫療檢查]

4. 您曾經在**過去兩年內**做過一般性的醫療檢查,像是量血壓,血糖,或是膽固醇的檢查嗎?

是.....01
否.....02
不知道/ 不確定 888
拒絕回答.....999

5. 在過去兩年內，那些曾經替您看病的醫生，有沒有任何一位建議您要做癌症篩檢?

有.....01
沒有[跳到第 6 題].....02

5.1 他（她)們建議您做什麼樣的癌症篩檢項目? [逐項圈選]

癌症名稱	有建議做	沒有建議做
乳癌	1	2
子宮頸癌	1	2
大腸直腸癌	1	2

5.2 這些醫生有多希望您做下面這些［癌症篩檢］? [*Fox, 1994*]

癌症篩檢名稱	非常希望	有一些希望	沒有表示意見	不是很希望	一點也不希望
乳房攝影檢查	1	2	3	4	5
子宮頸抹片檢查	1	2	3	4	5
糞便潛血試驗	1	2	3	4	5
軟式乙狀結腸鏡檢查	1	2	3	4	5
大腸鏡檢查	1	2	3	4	5

[就醫的障礙]

6. 當您需要就醫時, 您是否有過下列的這些問題? [讀出選項]

	是	否
6.1 沒有交通工具	1	2
6.2 很難預約看診時間	1	2
6.3 找不到人看小孩	1	2
6.4 沒有支薪的假期	1	2
6.5 沒有時間	1	2
6.6 有語言上的困難（很難找得到會說中文的醫師）	1	2
6.7 沒有或只有部份的醫療保險給付	1	2
6.8 太多書面資料要填	1	2
6.9 候診時間太久	1	2

第三部份　文化和文化改觀

[文化觀]

1. 以下的敘述是一般華裔婦女對健康，醫藥，以及醫療照顧可能有的看法。每一個敘述有五個選擇，我現在會一一的唸給您聽。請告訴我對於下列每個敘述的意見是：非常贊同、贊同、不贊同、非常不贊同、或者是沒意見。這沒有標準答案，我們只想請您發表您的意見。

敘述	非常贊同	贊同	沒意見	不贊同	非常不贊同
1.1 為能達到良好的健康，規律的到户外走走是絕對必要的。	1	2	3	4	5
1.2 某些特定的食物會對我不好，因為它會干擾到我身體冷熱的平衡。	1	2	3	4	5
*1.3*健康或生病是命中注定的。有些人總是健康的，有些人則是經常會生病。	1	2	3	4	5
*1.4*癌症很難去預防。	1	2	3	4	5
*1.5*夏天補涼(吃涼性食物)以及冬天補熱(吃暖性食物)會讓我的身體強壯。	1	2	3	4	5
*1.6*我最清楚我自己的身體不過了。	1	2	3	4	5
*1.7*最好不要想到癌症。如果我們想太多的話,我們可能會得癌症。	1	2	3	4	5
*1.8*大部份的疾病，除了外傷以外，都是因為身體內的冷熱不平衡。	1	2	3	4	5
*1.9*吃自己準備的食物是邁向健康的要素。	1	2	3	4	5
*1.10*得到癌症就好像被宣判了死刑一樣。	1	2	3	4	5
*1.11*只要我自己還能照顧自己並且保持健康,我就不需要去看醫生。	1	2	3	4	5
*1.12*我們不要太常吃“西藥”，因為它的化學成份會傷害我們的身體。	1	2	3	4	5
*1.13*中藥比較能使人體內的陰陽達到平衡。	1	2	3	4	5
*1.14*假如我命中注定要得到癌症，我就會得到它。	1	2	3	4	5
*1.15*個人體質不同。 因此,有些人比其他人更容易生病或更容易得到癌症。	1	2	3	4	5
*1.16*保持心情愉快,做我喜歡的事，並且不和其他人競爭可以讓我更健康。	1	2	3	4	5
*1.17*我不能掌控我自己的命運。	1	2	3	4	5
*1.18*中藥在預防疾病方面比西藥好。	1	2	3	4	5
*1.19*去診所或醫院太多次會容易得病或讓自己走霉運。	1	2	3	4	5
*1.20*很多的醫學檢查都太具侵入性，而且會讓我不舒服。	1	2	3	4	5
*1.21*一旦我們得了癌症，就只有“聽天由命”。	1	2	3	4	5
1.22 西藥在殺菌方面很有效，但不能預防疾病。	1	2	3	4	5
*1.23*假如我沒有生病，我不會看醫生。	1	2	3	4	5

1.24 沒有得到癌症是個人的運氣好。	1	2	3	4	5
1.25 對於治病的效果，中藥比西藥更好。	1	2	3	4	5
1.26 醫師通常都會做很多不必要的檢查。	1	2	3	4	5
1.27 三餐定時定量以及作息規律可以讓我們身體健康。	1	2	3	4	5
1.28 練氣功或太極拳可以幫助調節體內的“氣”，可以增強人的活力並能預防疾病。	1	2	3	4	5
1.29 不管我怎麼做，假如我會得到癌症，還是會得到。	1	2	3	4	5
1.30 假如一位醫師或護士檢查我的私處，我會感到很難為情。	1	2	3	4	5

[同化] (*Anderson, 1993*)

2. 以下要請問您有關您使用中文和英文的情形。請讓我知道您在下面每個選項中的語文能力是非常好, 很好, 普通, 不太好, 或者是一點也不會。

	非常好	很好	普通	不太好	一點也不會
2.1 了解口語英語	1	2	3	4	5
2.2 說英文	1	2	3	4	5
2.3 讀英文	1	2	3	4	5
2.4 寫英文	1	2	3	4	5
2.5 說中文（國語, 廣東話, 其他）	1	2	3	4	5
2.6 讀中文	1	2	3	4	5
2.7 寫中文	1	2	3	4	5

3. 您平常【 敘述 】是用那一種語言交談?

敘述	只說中文	大部份說中文	中文和英文	大部份說英文	只說英文
3.1 【和您大部份的朋友在一起時】	1	2	3	4	5
3.2【和您大部份的鄰居在一起時】	1	2	3	4	5
3.3 【和家人聚在一起的時候】	1	2	3	4	5

4.

	只有華人	大部份是華人	華人和美國人都有	大部份是美國人	只有美國人
4.1 您幾乎每天都會見到的好朋友。他(她)們是...	1	2	3	4	5
4.2 您幾乎每天都會見到的鄰居。他(她)們是...	1	2	3	4	5

第四部份 癌症知識以及篩檢的經驗

這個部份要請問您對於癌症及癌症檢查的看法。有得過癌症的人和沒有得過癌症的人可能會有不同的意見。所以我們想請問您

您曾經得過癌症嗎?

是.....01
否.....02

請問是那一種癌症? _____

[癌症的知識] (*NHIS, 1992*)
1. 您認為 [危險因子] 是導致 [癌症名稱]的一個原因嗎?
[從中圈選一個答案]

癌症名稱	年紀愈大	常食用高油脂飲食	常食用低纖維飲食	抽煙	家族病史	缺乏運動
乳癌	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道
子宮頸癌	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道
大腸直腸癌	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道

[Code: 是=1, 否=0]

1.1 您認為有多位性伴侶是造成子宮頸癌的一個原因嗎?

是.....01
否.....02
不知道/不確定.....888
不願回答.....999

[察覺到的風險]
2. 您認為在您一生中,您得到 [癌症名稱] 的機會有多大? 您認為是非常不可能,不太可能,有點可能,還是非常可能會得到?

癌症名稱	非常不可能	不太可能	有點可能	非常可能
乳癌	1	2	3	4
子宮頸癌	1	2	3	4
大腸直腸癌	1	2	3	4

3. 您認為您會得到【癌症名稱】的機會和其他跟您差不多年紀的婦女比起來是低很多，低一點，高一點，高出很多或者是一樣多？

癌症名稱	低很多	低一點	一樣多	高一點	高出很多
乳癌	1	2	3	4	5
子宮頸癌	1	2	3	4	5
大腸直腸癌	1	2	3	4	5

[耽憂和害怕] (*Schwartz, 1995*)

4. 一般說來，您有多擔心有一天您可能會得到 [癌症名稱]?

癌症名稱	一點都不耽心	很少耽心	有些擔心	十分耽心
乳癌	1	2	3	4
子宮頸癌	1	2	3	4
大腸直腸癌	1	2	3	4

5. 在過去一年當中，您有多常想到自己可能會得到 [癌症名稱]? [有四個選擇]

癌症名稱	不會想到或幾乎沒有想到	有時候會想到	經常想到	幾乎每天想到
乳癌	1	2	3	4
子宮頸癌	1	2	3	4
大腸直腸癌	1	2	3	4

[乳房攝影檢查]

6. 您曾經做過乳房攝影檢查嗎? 乳房攝影檢查是一種用 X 光照攝乳房的檢查。

是.....01
否 (跳到第 7 題).....02
不知道/不確定.....888
拒絕回答.....999

6.1 五十歲以後，您曾經做過多少次乳房攝影檢查? _____ 次

6.2 您最近一次的乳房攝影檢查是在什麼時候做的?

一年內.....01
一 到 二年前.....02
兩年多前.....03
不知道/ 不確定.....888
拒絕回答.....999

6.3 您上次去做乳房攝影檢查是因為乳房有腫塊或乳房有特別的問題,或者只是去做定期檢查而已?

定期檢查.....01
乳房/健康的問題.....02

6.4 您最近二次乳房攝影檢查相隔多久?

1年內.....01
1到2年.....02
2年以上.....03
只做過一次.....777
不知道/ 不確定.....888
拒絕回答.....999

【跳到第8題】

7. 您有聽過乳房攝影檢查嗎?

有.....01
沒有(跳到第 8題).....02

7.1 為什麼您以前沒有做這樣的檢查呢?_____

8. 您認為像您這個年紀的婦女應該多久做一次乳房攝影檢查?

1年1次.....01
每1到2年1次.....02
其他_____.....03
不知道/ 不確定.....888
拒絕回答.....999

9. 您明年有做乳房攝影檢查的計劃嗎?

有.....01
沒有.....02
不知道/ 不確定.....888
拒絕回答.....999

[子宮頸抹片檢查]

10 您曾經做過子宮頸抹片檢查嗎? 子宮頸抹片檢查是，先請您躺在內診臺上，並把腳放在馬鐙形的腳架上，然後醫師或護士會拿棉棒在子宮頸處騷括並取出細胞樣本，再送到檢驗室檢驗的一種檢查方式。

是.....01
否（跳到第 11 題）.....02

10.1 您曾經做過多少次子宮頸抹片檢查? _____ 次

10.2 您最近一次的子宮頸抹片檢查是在什麼時候做的?

1 年內.....01
1 到 2 年.....02
2 到 3 年.....03
3 年以上.....04
不知道/ 不確定.....888
拒絕回答.....999

10.3 您上次去做子宮頸抹片檢查是因為和健康有關的因素（譬如: 出血、疼痛、有分泌物、或是發炎），或只是定期檢查的一部份而已?

定期檢查.....01
和健康有關的因素.....02

10.4 您最近二次子宮頸抹片檢查相隔多久?

1 年內 01
1 到 2 年內 02
2 to 3 年內.....03
3 年以上.....04
只做過一次.....777
不知道/ 不確定.....888
拒絕回答.....999

【跳到第 12 題】

11. 您有聽過子宮頸抹片檢查嗎?

有.....01
沒有（跳到第 12 題）.....02

11.1 為什麼您以前沒有做這樣的檢查呢? _____

12. 您認為像您這個年紀的婦女應該多久做一次子宮頸抹片檢查?

1年1次.....01
每1到2年1次.....02
其他_____.....03
不知道/ 不確定.....888
拒絕回答.....999

13. 您在1到3年內有做子宮頸抹片檢查的計劃嗎?

有.....01
沒有.....02
不知道/ 不確定.....888
拒絕回答.....999

[糞便潛血試驗]

14. 您曾經做過糞便潛血檢查嗎? 糞便潛血試驗可以檢查出我們看不見但已經存在大便或腸道中的血液。這項檢查的方式有兩種：首先，醫師或護士會戴上手套，把一個手指伸入病人的直腸中，取得大便檢體，把它放在一個小的抹片上。 第二種是病人自行到洗手間取得他（她）的大便檢體，然後將大便檢體放在醫師給他（她）的小卡片裡面。在連續取得三天的大便檢體後，病人再把檢體送回到醫師那裡做檢驗。

是.....01
否(跳到第 15 題).....02

14.1 在您的一生中您曾經做過多少次糞便潛血檢查? _____ 次

14.2 您最近一次的糞便潛血檢查是在什麼時候做的?

1 年之內.....01
1到 2 年之前.....02
2 年以上的時間.....03
不知道/ 不確定.....888
拒絕回答.....999

14.3 您上次做糞便潛血檢查是因為有健康方面的問題，或只是定期檢查的一個項目而已?

定期檢查.....01
有健康方面的問題.....02

14.4 您最近二次糞便潛血檢查相隔多久?

1 年內.....01
1 到 2 年.....02
2 年以上.....03
只做過一次.....777
不知道/ 不確定.....888
拒絕回答.....999

【跳到第 16 題】

15. 您有聽過糞便潛血檢查嗎?

有.....01
沒有（跳到第 16 題）.....02

15.1 為什麼您以前沒有做這樣的檢查呢? _____

16. 您認為像您這個年紀的婦女應該多久做一次糞便潛血檢查?

1 年 1 次.....01
每 1 到 2 年 1 次.....02
其他_____.....03
不知道/ 不確定.....888
拒絕回答.....999

17. 您明年有做糞便潛血檢查的計劃嗎?

有.....01
沒有.....02
不知道/ 不確定.....888
拒絕回答.....999

[軟式乙狀結腸鏡檢]

18. 您曾經做過軟式乙狀結腸鏡檢嗎? 軟式乙狀結腸鏡檢是將一條管子放入您結腸的下段，然後用它來檢查結腸內是否有任何癌的病兆。

是.....01
否（跳到第 19 題）.....02

18.1 您最近一次的軟式乙狀結腸鏡檢是在什麼時候做的?

一年內.....01
1 到 2 年前.....02
2 到 3 年前.....03
3 到 4 年前.....04

4 到 5 年前.....05
5 年前.....06
超過 5 年以上的時間.....07

18.2 您上次做軟式乙狀結腸鏡檢是因為有健康方面的問題，或者只是定期檢查的一個項目而已?

定期檢查.....01
和健康有關的因素.....02

【跳到第 20 題】

19. 您有聽過乙狀結腸鏡檢查嗎?

有.....01
沒有（跳到第 20 題）.....02

19.1 為什麼您以前不想做這樣的檢查呢? _____

20. 您認為像您這個年紀的婦女應該多久做一次乙狀結腸鏡檢查?

每 5 年 1 次.....01
其他_____.....02
不知道/ 不確定.....888
拒絕回答.....999

21. 您在未來 5 年內年有做軟式乙狀結腸鏡檢查的計劃嗎?

有.....01
沒有.....02
不知道/ 不確定.....888
拒絕回答.....999

[大腸鏡檢]

22. 您曾經做過大腸鏡檢查嗎? 大腸鏡檢查是將一條管子放入您的大腸，然後用它來檢查是否大腸內有任何癌症的病兆。這項檢查會給予藥物讓您不痛。這條管子可以看到整個大腸，但軟式乙狀結腸鏡檢查只能夠看到大腸的下半段而已。

是.....01
否（跳到第 23 題）.....02

22.1 您最近一次的大腸鏡檢查是在什麼時候做的?

10 年之內 01
10 年以前 02

22.2 您上次做大腸鏡檢查是因為有健康方面的問題，或者只是定期檢查的一個項目而已?

定期檢查.....01
和健康有關的因素.....02

【跳到第 24 題】

23. 您有聽過大腸鏡檢查嗎?

有.....01
沒有 (跳到第 24 題).....02

23.1 為什麼您以前沒有做這樣的檢查呢? _____

24. 您認為像您這個年紀的婦女應該多久做一次大腸鏡檢查?

每 10 年 1 次.....01
其他_____.....02
不知道/ 不確定.....888
拒絕回答.....999

25. 您在未來 10 年內有做大腸鏡檢查的計劃嗎?

有.....01
沒有.....02
不知道/ 不確定.....888
拒絕回答.....999

26. 以下是婦女對於做乳癌、子宮頸癌，及大腸直腸癌三種癌症檢查可能有的看法。 請告訴我您對這些敘述是非常贊同、贊同、不贊同、非常不贊同，沒意見，或是不知道。 [*Rakowski, 1997*]

敘述	非常贊同	贊同	沒意見	不贊同	非常不贊同	不知道
26.1 如果您的醫師告訴您癌症檢查的重要性，您會比較想要去做乳房攝影檢查。	1	2	3	4	5	6
26.2 定期做癌症檢查能讓您對您的健康感到放心。	1	2	3	4	5	6
26.3 您耽心做癌症檢查，很有可能導致不必要的手術。						
26.4 即使家中沒有人得過癌症，還是有必要做癌症檢查。	1	2	3	4	5	6
26.5 假如您的醫師好像不確定是否您需要做癌症檢查，您可能不會想做。						
26.6 假如癌症檢查發現了不正常，那麼不管做什麼都於事無補。	1	2	3	4	5	6
26.7 假如您吃的食物很健康，那麼您得到癌症的機會就會降低很多，您可能就不需要去做癌症檢查。	1	2	3	4	5	6
26.8 對像您這樣年紀的婦女來說，癌症檢查並不重要。	1	2	3	4	5	6
26.9 一旦您有幾次正常的癌症檢查結果，之後的幾年就不需要再做了。	1	2	3	4	5	6
26.10 除非有症狀出現或感到不舒服，您大概不會想去做癌症檢查。	1	2	3	4	5	6
26.11 癌症檢查可以在癌症最有可能被治癒的時候就發現。	1	2	3	4	5	6
26.12 癌症檢查並沒有像大家說得那麼重要。	1	2	3	4	5	6
26.13 您可能不會做癌症檢查，除非您的醫師提醒您。	1	2	3	4	5	6
26.14 每一兩年做一次癌症檢查使您覺得您能夠掌握自己的健康。	1	2	3	4	5	6
26.15 假如醫師或護士幫您檢查過您的乳房，您就不需要去做乳房攝影檢查了。	1	2	3	4	5	6
26.16 每一年或二年做一次乳房攝影檢查，對您是最有幫助的。						
26.17 子宮頸抹片檢查很快就可以做好了，做這種檢查不是一種困擾。	1	2	3	4	5	6
26.18 子宮頸抹片檢查能夠在癌症尚未發展之前，就能發現問題。	1	2	3	4	5	6
26.19 子宮頸抹片檢查的結果並不可靠，因為有些檢驗室做的檢查比其他檢驗室來的好。	1	2	3	4	5	6
26.20 每一年或二年做一次子宮頸抹片檢查，對您是最有幫助的。						
26.21 停經後的婦女不需要經常做子宮頸抹片檢查。	1	2	3	4	5	6
26.22 在婦女停止生育之後，她們不需要做子宮頸抹片檢查。	1	2	3	4	5	6
26.23. 做糞便潛血檢查要您自己取得糞便樣本，真是噁心。	1	2	3	4	5	6

SA=Strongly agree; A=Agree; N=Neutral; DA=Disagree; SD=Strongly disagree.

第五部份　抽煙

1. 您曾經抽煙嗎？
   是 01
   否〔跳到第 2 題〕 02
   1.1 您現在有抽煙嗎？
      是 01
      否〔跳到第 2 題〕 02
   1.2 您曾經試過或想過要戒菸嗎？
      我以前戒過菸 01
      我曾經想過要戒菸 02
      否 03

2. 〔不把您自己算在內〕您的家人中有多少人抽煙？ _____ 人

3. 他們是您的什麼人？

	有抽煙	沒抽煙
父親	1	2
母親	1	2
先生(丈夫)	1	2
兒子	1	2
女兒	1	2
孫子	1	2
孫女	1	2
其他，請註明 _____	1	2

4. 您認為他/她/他們會聽您的建議去戒菸嗎？

_____

非常謝謝您花時間完成我們的訪談。您的回答能提供有關華裔婦女健康以及健康照護的寶貴資料。您將會在二到四個禮拜內收到一份防癌教育教材。我們將會在您收到並看過了教材後的1-2個禮拜左右,再打電話給您,請問您對這份防癌教育教材的意見。除此之外,我們將會持續的郵寄給您和健康有關的資訊並在１－２年後，再做最後一次的訪談。請您留下您的聯絡資料:

姓名: _____

住址: _____

城市名_____ 州_____ 郵遞區號_____

電話號碼: (　　) _____

請問您可以給另外一或二位您親戚或朋友的住址以及電話號碼, 假如我們和您聯繫不上時,他(她)可能會知道要如何和您聯絡?

聯絡人:

姓名: _____ 和您的關係: _____

住址: _____

城市名_____ 州_____ 郵遞區號_____

電話號碼: (　　) _____

很高興和您談話。 我將於1-2個月後再次與您聯絡。假如您對這研究以及你的參與有任何問題,請和喬治城大學的陳美玉女士聯絡; 她的電話是(202) 687-0155. 謝謝。再見!

IMPACT OF CULTURE ON CANCER SCREENING IN CHINESE WOMEN

FOLLOW-UP SURVEY

Georgetown University

Subject ID# _____

Introduction

Hello, Mrs. [SUBJECT]. I am [INTERVIEWER], calling from Georgetown University for the project on Chinese American women's cancer education. The purpose of this phone call is to know what you think about the Chinese language educational materials that we sent to you a couple weeks ago. Your opinions will be used to improve these materials, which will benefit other Chinese American women your age. The interview will last for about 15-20 minutes, and all the information you give us will be kept confidential. Do you have time now?

[If NO] May I set up an appointment with you to call you back for this interview?
[Record the appointment date and time in the table.]

Appointments:

Date	Time	Spoke with	Call back date	Call back time	Interviewer
/ /	am/pm			am/pm	
/ /	am/pm			am/pm	
/ /	am/pm			am/pm	

[If YES] Do you have any questions before we start? [If NO, continue onto the next page.]

REMINDER: Code "777" for non-applicable questions; "888" for "Don't know/Unsure," and "999" for "Do not want to answer/Refusal."

Telephone Call Tracking Sheet

Multiple tries:

Date	Time 1		Time 2		Time 3		Time 4		Interviewer
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	

B=Line busy; N=No answer.

FINAL DISPOSITION: ____ (1-Completed; 2-Not able to contact; 3-Wrong number)

DATE: ____ / ____ / 20 _____

INTERVIEWER: _____

SECTION I Evaluation of the Mailing of the Educational Materials

Let us start with the educational materials that we sent to you by mail a couple weeks ago.

1. Have you received the Chinese language educational materials?

Yes (Skip to 2) 01
No 02

1.1. We are sorry that you did not get the materials.
May I ask whether your mailing address is [READ MAILING ADDRESS]?

[RECODE]
Correct address 01
Incorrect address (STOP; Go to "Offer a second mailing") ... 02

1.2. Do you have any ideas why you did not receive this package? (Explore other ways the materials can reach the participant. Mail it again if necessary)

_____

2. Do you think mailing you these materials is a good way to provide you information with cancer and cancer screening? Please let us know for any suggestions that you may have about this method.

_____

****

[Offer a second mailing]
Mrs. [Name], for some reasons we did not have your correct mailing address. However, we will be very happy to mail you another sets of Chinese cancer screening materials. Could you please tell me your current mailing address?

Name: _____ Relationship: _____

Address: _____

City _____ State _____ Zip_____

Telephone: ( ) _____

Thank you very much. We'll mail out the materials in a few days. After you review these materials, we'll contact you again in one or two weeks to ask about your opinions about these materials. Bye-Bye.

Note: If the participant cannot spell the address in English: Ask whether someone in the house can help out. Offer to call back to speak to whoever is capable of providing the participant's address.

SECTION II Evaluation of Cancer Screening Educational Materials

Now, I would like to ask for your opinions regarding the educational materials. The opinions you share will not involve right or wrong answers. Your opinions are the most useful and helpful information for us to improve the materials.

1. What did you think the topics of these materials were about?

2. Do you think these materials provide you enough information about how to prevent breast, cervical, and colorectal cancers?

   Yes. Comments:_____

   No. Reasons: _____

3. Is there anything you didn't understand? Please tell me **which part and why** you didn't understand.

   Yes.....1

   Breast Cancer _____

   Cervical Cancer _____

   Colorectal Cancer _____

   No.....2

4. Did you have any opinions about reading these educational materials regarding the font, content, color, pictures, and length of the materials. We will ask you one by one. Please share your opinions with us.

   Font _____

   Content _____

   Color _____

   Pictures (including graphics) _____

   Length _____

5. What did you like most about these educational materials?

6. What did you like least about these educational materials?

7. What are the things in the materials you would like to add or delete?

   Add: _____

   Delete: _____

8. Do you think that these educational materials reflect any Chinese thoughts you can identify with?

   Yes 01
   No 02

   8.1. Please tell us why you think so. (Please give one or two examples such as sentences and/or pictures)

   _____

9. Would you read these materials whenever you need information about breast, cervical, and colorectal cancer ?

   Yes 01
   No (To 9.1) 02

   9.1 Please explain: _____

10. Would you recommend that your friends and family read these materials?

    Yes 01
    No 02

11. Compare to other cancer materials you read before, do you think the materials we designed will better help you to be aware of cancer?

Yes 01
No 02

12. Overall, how useful do you think these materials would be to other Chinese American women like you? [READ CATEGORIES]

Extremely useful 01
Very useful 02
Somewhat useful 03
Not very useful 04
Not useful at all 05

SECTION III Cancer Knowledge and Screening Experience

This section asks about your opinions about cancer and experiences with and opinions of several screening tests for breast, cervical, and colorectal cancers.

[Cancer knowledge] (*NHIS, 1992*)
1. Do you think [RISK FACTOR] is a risk factor for [CANCER NAME]?
[CIRCLE ONE RESPONSE]

Cancer	Increased age	High fat diet	Low fiber diet	Smoking	Family history	Exercise
Breast	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK
Cervical	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK
Colorectal	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK	Yes/No/DK

[Code: Yes=1, No=0]

1.1 Do you think having multiple sexual partners is a risk factor for Cervical Cancer?

Yes.....01
No.....02
Don't know/Unsure.....888
Refused to answer.....999

2. The following statements are opinions about cancer screenings other women your age may have. Please tell me if you strongly agree, agree, disagree, strongly disagree, or are neutral to each of the statements. [*Rakowski, 1997*]

Statements	SA	A	N	DA	SD	Unknown
2.1 I would be more likely to go for cancer screening if my doctor told me how important it was.	1	2	3	4	5	6
2.2 Regular cancer screening gives you peace of mind about your health.	1	2	3	4	5	6
2.3 I worry that cancer screening has a high chance of leading to surgery that is not needed.	1	2	3	4	5	6
2.4 Cancer screening is necessary even when there is no history of cancer in a family.	1	2	3	4	5	6
2.5 I would probably not have cancer screening if my doctor seemed to doubt that I really needed one.	1	2	3	4	5	6
2.6 If cancer screening finds something, then whatever is there will be too far along to do anything.	1	2	3	4	5	6
2.7 If I eat a healthy diet, I will lower my risk of getting cancer far enough that I probably do not need to go for cancer screening.	1	2	3	4	5	6
2.8 Cancer screening is not important for a woman my age.	1	2	3	4	5	6

2.9 Once you have a couple of cancer screening results that are normal, you don't need to have any more for a few years.	1	2	3	4	5	6
2.10 I would probably not go for cancer screening unless I had some symptoms or discomfort.	1	2	3	4	5	6
2.11 Cancer screening finds cancer at a point when it is more likely to be cured.	1	2	3	4	5	6
2.12 Cancer screening is not as important as people say it is.	1	2	3	4	5	6
2.13 I would probably not have cancer screening unless I got a reminder from my doctor.	1	2	3	4	5	6
2.14 Having a mammogram every year or two will give me a feeling of control over my health.	1	2	3	4	5	6
2.15 If I have a breast exam from a doctor or nurse, I don't need to have a mammogram.	1	2	3	4	5	6
2.16 Mammograms are most helpful when you have one every year or two.	1	2	3	4	5	6
2.17 A Pap test can be done so quickly that it is not a bother to have one.	1	2	3	4	5	6
2.18 A Pap test can find a problem even before it develops into cancer.	1	2	3	4	5	6
2.19 Pap test results cannot be trusted because some labs that do the tests are better than others.	1	2	3	4	5	6
2.20 A Pap test is most helpful when you have one every year or two.	1	2	3	4	5	6
2.21 Women who reach menopause do not need Pap tests very often.	1	2	3	4	5	6
2.22 After women stop having children they do not need Pap tests.	1	2	3	4	5	6
2.23. A blood stool test involves a series of unpleasant procedures that I have to do myself.	1	2	3	4	5	6

SA=Strongly agree; A=Agree; N=Neutral; DA=Disagree; SD=Strongly disagree.

3. How often do you think women your age should have a mammogram?

Recall correctly (Once a year)..... 01
Recall incorrectly 02

4. How often do you think women your age should have a Pap smear?

Recall correctly (Once a year)..... 01
Recall incorrectly 02

5. How often do you think women your age should have a blood stool test?

Recall correctly (Once a year)..... 01
Recall incorrectly 02

6. How often do you think women your age should have a flexible sigmoidoscopy?

Recall correctly (Once a year)..... 01
Recall incorrectly 02

7. How often do you think women your age should have a colonoscopy?

Recall correctly (Once a year)..... 01
Recall incorrectly 02

Section IV Cancer Screening Experience / Future Screening Intentions

The following questions ask about your experience in cancer screening.

[MAMMOGRAPHY]

1. Do you plan to have a mammogram in the next year?

Yes (To 1.1.) 01
No (To 1.3.) 02

1.1. Would you say that your decision to have a mammogram in the next year was made after reading the educational materials we gave you?

Yes (To 2) 01
No 02

1.2. What are other factors, such as information from the doctor's office, contributing to your decision to have a mammogram in the next year? [Check all that apply]

Doctor's recommendation 01
Having being regularly getting screening 02
Family members' encouragement 03
Information from newspapers, magazines 04
Encouragement from friends 05
Insurance coverage 06
Family history 07
Existing disease 08
Other, specify: _____ 09

1.3. What are your reasons for not planning to have a mammogram? [Check all that apply]

Lack of transportation 01
Difficulty in getting an appointment 02
Language barrier (hard to find a doctor speaking Chinese). 03
No time 04
No paid leave 05
My doctor did not recommend 06
I don't think I will get breast cancer 07
I'm too old for it 08
I had previous negative results 09
It's embarrassing 10
Lack of a babysitter 11
No or only partial insurance coverage 12
Too much paperwork 13
Long waiting time 14
Unpleasant prior experience 15
Too many restrictions (diet) 16
Other, specifiy;_____ 17

[PAP SMEAR]

2. Do you plan to have a Pap test in the next year?

Yes (To 2.1.) 01
No (To 2.3.) 02

2.1. Would you say that your decision to have a Pap test in the next year was made after reading the educational materials we gave you?

Yes (To 3) 01
No 02

2.2. What are other factors, such as information from the doctor's office, contributing to your decision to have a Pap test in the next year? [Check all that apply]

Doctor's recommendation 01
Having being regularly getting screening 02
Family members' encouragement 03
Information from newspapers, magazines 04
Encouragement from friends 05
Insurance coverage 06
Family history 07
Existing disease 08
Other, specify: _____ 09

2.3. What are your reasons for not planning to have a Pap test? [Check all that apply]

Lack of transportation 01
Difficulty in getting an appointment 02
Language barrier (hard to find a doctor speaking Chinese). 03
No time 04
No paid leave 05
My doctor did not recommend 06
I don't think I will get cervical cancer 07
I'm too old for it 08
I had previous negative results 09
It's embarrassing 10
Lack of a babysitter 11
No or only partial insurance coverage 12
Too much paperwork 13
Long waiting time 14
Unpleasant prior experience 15
Too many restrictions (diet) 16
Other, specifiy; _____ 17

[FOBT]

3. Do you plan to have a blood stool test in the next year?

Yes (To 3.1.) 01
No (To 3.3.) 02

3.1. Would you say that your decision to have a blood stool test in the next year was made after reading the educational materials we gave you?

Yes (To 4) 01
No 02

3.2. What are other factors, such as information from the doctor's office, contributing to your decision to have a blood test in the next year? [Check all that apply]

Doctor's recommendation 01
Having being regularly getting screening 02
Family members' encouragement 03
Information from newspapers, magazines 04
Encouragement from friends 05
Insurance coverage 06
Family history 07
Existing disease 08
Other, specify: _____ 09

3.3. What are your reasons for not planning to have a blood stool test? [Check all that apply]

Lack of transportation 01
Difficulty in getting an appointment 02
Language barrier (hard to find a doctor speaking Chinese). 03
No time 04
No paid leave 05
My doctor did not recommend 06
I don't think I will get colorectal cancer 07
I'm too old for it 08
I had previous negative results 09
It's embarrassing 10
Lack of a babysitter 11
No or only partial insurance coverage 12
Too much paperwork 13
Long waiting time 14
Unpleasant prior experience 15
Too many restrictions (diet) 16
Other, specifiy;_____ 17

[FLEXIBLE SIGMOIDOSCOPY]

4. Do you plan to have a flexible sigmoidoscopy in the next year?

Yes (To 4.1.) 01
No (To 4.3.) 02

4.1. Would you say that your decision to have a flexible sigmoidoscopy in the next year was made after reading the educational materials we gave you?

Yes (To 5) 01
No 02

4.2. What are other factors, such as information from the doctor's office, contributing to your decision to have a flexible sigmoidoscopy in the next year? [Check all that apply]

Doctor's recommendation 01
Having being regularly getting screening 02
Family members' encouragement 03
Information from newspapers, magazines 04
Encouragement from friends 05
Insurance coverage 06
Family history 07
Existing disease 08
Other, specify: _____ 09

4.3. What are your reasons for not planning to have a flexible sigmoidoscopy? [Check all that apply]

Lack of transportation 01
Difficulty in getting an appointment 02
Language barrier (hard to find a doctor speaking Chinese). 03
No time 04
No paid leave 05
My doctor did not recommend 06
I don't think I will get colorectal cancer 07
I'm too old for it 08
I had previous negative results 09
It's embarrassing 10
Lack of a babysitter 11
No or only partial insurance coverage 12
Too much paperwork 13
Long waiting time 14
Unpleasant prior experience 15
Too many restrictions (diet) 16
Other, specifiy; _____ 17

[COLONOSCOPY]

5. Do you plan to have a colonoscopy in the next year?

Yes (To 5.1.) 01
No (To 5.3.) 02

5.1. Would you say that your decision to have a colonoscopy in the next year was made after reading the educational materials we gave you?

Yes (To 6) 01
No 02

5.2. What are other factors, such as information from the doctor's office, contributing to your decision to have a colonoscopy in the next year? [Check all that apply]

Doctor's recommendation 01
Having being regularly getting screening 02
Family members' encouragement 03

Information from newspapers, magazines..... 04
Encouragement from friends..... 05
Insurance coverage.....06
Family history 07
Existing disease 08
Other, specify: _____..... 09

5.3. What are your reasons for not planning to have a colonoscopy? [Check all that apply]

Lack of transportation 01
Difficulty in getting an appointment 02
Language barrier (hard to find a doctor speaking Chinese). 03
No time 04
No paid leave..... 05
My doctor did not recommend..... 06
I don't think I will get colorectal cancer..... 07
I'm too old for it 08
I had previous negative results 09
It's embarrassing 10
Lack of a babysitter..... 11
No or only partial insurance coverage..... 12
Too much paperwork 13
Long waiting time..... 14
Unpleasant prior experience.....15
Too many restrictions (diet).....16
Other, specifiy;_____..... 17

6. Since our last contact, has your health insurance coverage changed?

Yes 01
No (Go to next section)..... 02

6.1 What is your health care coverage now? [Check all that apply]

Medicare..... 01
Medicaid 02
HMO..... 03
Private insurance..... 04

SECTION III Health Status

This survey asks for your views about your health. This information will help you keep track of how you feel and how well you are able to do your usual activities.

1. Overall, how would you rate your health in the past year?

Excellent 01
Very good 02
Good 03
Fair 04
Poor 05
Very poor 06
Don't know/Unsure 888
Refuse to answer 999

3. During the past year, how much did physical health problems limit your usual physical activities (such as walking or climbing stairs)?

Not at all 01
Very little 02
Somewhat 03
Quite a lot 04
Could not do physical activities 05
Don't know/unsure 888
Refuse to answer 999

4. During the past year, how much difficulty did you have doing your daily work, both at home and away from home, because of your physical health?

Not at all 01
A little bit 02
Some 03
Quite a lot 04
Could not do daily work 05
Don't know/unsure 888
Refuse to answer 999

5. How much bodily pain have you had in the past year?

None 01
Very mild 02
Mild 03
Moderate 04
Severe 05
Very severe 06
Don't know/unsure 888
Refuse to answer 999

6. During the past year, how much energy did you have?

Very much 01
Quite a lot 02
Some 03
a little 04
None 05
Don't know/unsure 888
Refuse to answer 999

7. During the past year, how much did your physical health or emotional problems limit your usual social activities with family or friends?

Not at all 01
Very little 02
Somewhat 03
Quite a lot 04
Could not do social activities 05
Don't know/unsure 888
Refuse to answer 999

8. During the past year, how much have your been bothered by emotional problems (such as feeling anxious, depressed, or irritable)?

Not at all 01
Slightly 02
Moderately 03
Quite a lot 04
Extremely 05
Don't know/unsure 888
Refuse to answer 999

9. During the past year, how much did personal or emotional problems keep you from doing your usual work, school, or other daily activities?

Not at all 01
Very little 02
Somewhat 03
Quite a lot 04
Could not do daily work 05
Don't know/unsure 888
Refuse to answer 999

Section IV Intervention Strategy Probe

1. If we hold a series of classes offering your more information about the risk of cancer and how we can prevent cancer by professionals and discussion from participants, would you like to attend?

Yes.....01
No (go to 1.1) 02

1.1 Could we know why you don't like to attend?

_____

2. Where would you like the classes being held? [Check all that apply]

Community service center..... 01
Senior Center 02
Church..... 03
Home..... 04
Local school..... 05
The place your work 06
Clincs..... 07
Don't know/unsure.....888
Refuse to answer.....999

3. If we make a video with a soap opera format targeting issues on breast, cervical, and colorectal cancers, would you like to have one to watch at home?

Yes.....01
No (go to 1.1) 02

Thank you very much for taking your time completing this interview. It has been a pleasure talking to you. If you have any questions regarding this study and your participation, please contact Mrs. Mei-Yuh Chen at Georgetown University; her work number is (202) 687-0155. We will contact you again in the next 1-2 years to see how you are doing.

Thanks. Bye.

MAKING AN APPOINTMENT WITH YOUR HEALTH
與健康有約

FOLLOW-UP SURVEY

喬治城大學

研究對象代號# _____

前言

您好， [某某某]女士. 我是 [電話訪問員]，從喬治城大學『與健康有約』婦女健康研究計劃打電話給您。 您還記得今年___月份時我打電話給您，談到了您對健康的看法。我們大概在兩個禮拜前寄給您一份中文的教材。我想要和您談談您對這份中文教材的看法。您的意見可以用來改善我們的教材，並幫助和您差不多年紀的婦女。這次電話訪談大概需要 20-30 分鐘，您提供給我們的資料會絕對保密。您現在有時間嗎?

[假如 沒時間] 我可以和您約別的時間進行訪談嗎?
[假如可以，在表格中填入訪談的日期和時間]
[假如不可以，跳到下面拒絕欄表格]

Appointments:

Date	Time	Spoke with	Call back date	Call back time	Interviewer
/ /	am/pm			am/pm	
/ /	am/pm			am/pm	
/ /	am/pm			am/pm	

拒絕欄:
您可不可以告訴我爲什麼您不想要參加這個研究嗎? [逐字紀錄]

RECODE→
太忙了.....01
身體很不舒服.....02
沒有興趣.....03
覺得訪談時間太長了.....04
對做訪談有負面的反應.....05
個人隱私.....06
其他 (請註明)_____ 07

[假如 有時間] 在我們訪談開始之前，您有沒有問題要問? [假如沒有，翻到下一頁]

備註: 代碼 "777" 表示這是不適用的問題; "888" 表示 "不知道/不確定," 以及 "999" 表示 "不想回答/拒絕回答."

Telephone Call Tracking Sheet

Multiple tries:

Date	Time 1		Time 2		Time 3		Time 4		Interviewer
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	
/ /	am pm	B N	am pm	B N	am pm	B N	am pm	B N	

B=Line busy; N=No answer.

FINAL DISPOSITION: ____ (1-Completed; 2-Not able to contact; 3-Wrong number)

DATE: ____ / ____ / 20 _____

INTERVIEWER: _____

第一部份　郵寄教材的評值

我們就從幾個禮拜前寄給您的教材開始。 它是裝在一個黃色的信封袋裡面，裝有三份中文教材。您記得嗎？您可以把它拿出來看嗎？

1. 您有收到乳癌、子宮頸癌及大腸直腸癌中文的教材嗎?

有（跳到第 2 題）.....01
沒有 02

1.1. 我們很抱歉，您沒有收到這份教材。
請問您的住址是不是[唸出住址]？

[RECODE]
住址正確.....01
住址不正確（停住; 跳到 "提供再次郵寄"）.....02

****

[提供再次郵寄]
[xxx]女士，我們很抱歉沒有您正確的住址。我們想要再寄一份中文的防癌教材給您。可以請問您目前的住址嗎?

住址: _____

城市名 _____ 州 _____ 郵遞區號_____

非常謝謝您。我們在幾天內便會將教材寄給您。並過幾個禮拜後再和您聯絡，請問您對於這些教材的意見。再見。

備註:假如參與者無法拼出英文住址: 請尋求他的家人幫忙。 或說，會再打電話來詢問她的家人。

第二部份　　防癌教材的評值

現在，我想要請問您對於這份教材的意見。所有的答案都沒有對或錯。 您的意見都很寶貴，可以有效地幫助我們來改善這份教材。

1. 您最喜歡這些教材的哪一個部份？

2. 您最不喜歡這些教材的哪一個部份？

3. 您希望增加或刪除教材中的那些部份？

增加_____

刪除_____

4. 有任何地方您不了解的嗎? 請告訴我**哪個部分**以及**為什麼**您不了解。

有.....1

乳癌 _____

子宮頸癌_____

大腸直腸癌 _____

沒有.....2

5. 我們想請問您對於這些教材的字體、內容、顏色、照片以及教材的長度上有沒有什麼意見。請告訴我您對每一項目的意見是非常不好、不好、很好、非常好，或是普通(還可以)。也請您告訴我們您的建議。

	非常不好	不好	普通	很好	非常好	建議
字體	01	02	03	04	05	
內容	01	02	03	04	05	
顏色	01	02	03	04	05	
照片(包括圖形)	01	02	03	04	05	
教材的長度	01	02	03	04	05	

《Code》非常不好(01)、不好(02)、很好(03)、非常好(04)，或是普通(05)

6 您認為這份教材能夠反映出任何您可以認同的中國人的想法嗎？

是.....01
否.....02

請告訴我們為什麼您這麼想。(請舉一或二個例子。譬如，句子以及／或者是圖片)

_____

7. 當您需要關於乳癌、子宮頸癌、以及大腸直腸癌的資料時，您會再讀這份教材嗎?

會 01
不會 (跳到 7.1) 02

7.1 請說明原因: _____

8. 您會推薦您的朋友或家人閱讀這份教材嗎？

會 01
不會..... 02

9. 您以前讀過其他防癌的教材嗎？

有..... 01
沒有 ..... 02 〔跳到 11〕

10. 和其他您所讀過的癌症教材相比較，您認為我們寄給您這份教材的資訊是比較多、比較少、或者是一樣多？

內容較多.....01
一樣多.....02
內容較少.....03
從未讀過其他的教材.....777
不知道/不確定.....888
拒絕回答.....999

11. 整體來說，您認為這份教材對其他華裔婦女有多大的用處？[讀出選項]

有用極了.....01
非常有用.....02
有些有用.....03
不怎麼有用.....04
完全沒有用處.....05

12. 從哪裡您可以獲得健康方面的訊息？ [可複選]

醫生.....01
朋友和家人.....02
電視.....03
收音機.....04
電腦 (網路).....05
雜誌 06
報紙.....07
健康博覽會.....08
書.....09
手冊，請註明_____.....10
其他，_____.....11

第三部份　癌症知識以及癌症檢查的意願

這部份想要請教您對癌症檢查的意見。

[癌症知識] (*NHIS, 1992*)

1. 您認為 [危險因子] 是導致 [癌症名稱] 的一個原因嗎?
[從中圈選一個答案]

癌症名稱	年紀愈大	常食用高油脂飲食	常食用低纖維飲食	抽煙	家族病史	缺乏運動
乳癌	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道
子宮頸癌	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道
大腸直腸癌	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道	是/否/不知道

[Code: 是=1, 否=0]

1.1 您認為有多位性伴侶是造成子宮頸癌的一個原因嗎?

是.....01
否.....02
不知道/不確定.....888
不願回答.....999

2. 像您這個年紀的婦女應該多久做一次乳房攝影檢查?

1年1次.....01
每1到2年1次.....02
其他(請註明_____).....03
不需要做乳房攝影檢查 04
不知道/ 不確定.....888
拒絕回答.....999

3. 像您這個年紀的婦女應該多久做一次子宮頸抹片檢查?

1年1次.....01
每1到2年1次.....02
其他(請註明_____).....03
不需要做子宮頸抹片檢查 04
不知道/ 不確定.....888
拒絕回答.....999

4. 像您這個年紀的婦女應該多久做一次糞便潛血檢查?

1年1次.....01
每1到2年1次.....02
其他(請註明_____).....03
不需要做糞便潛血檢查了 04
不知道/ 不確定.....888
拒絕回答.....999

5. 像您這個年紀的婦女應該多久做一次軟式乙狀結腸鏡檢查?

每5年1次.....01
其他 (請註明_____).....02
不需要做軟式乙狀結腸鏡檢查了 03
不知道/ 不確定.....888
拒絕回答.....999

6. 像您這個年紀的婦女應該多久做一次大腸鏡檢查?

每 5年1次.....01
每10年1次.....02
其他(請註明_____).....03
不需要做大腸鏡檢查了 04
不知道/ 不確定.....888
拒絕回答.....999

7. 請問您在未來的一年內有做乳房攝影檢查的計畫嗎?

有 01
沒有 (跳到 7.3.) 02
不確定/可能會,請註明原因_____.....888

7.1. 是什麼因素使您決定去做乳房攝影檢查? [可複選]

醫師的建議.....01
已有定期做檢查的習慣 02
家人的鼓勵.....03

報紙、雜誌的訊息 04
電視得到的訊息..... 05
朋友的鼓勵..... 06
保險有給付 07
有家族病史 08
看了您們給我的教材 09
經過和電話訪問員談過話以後 10
乳房方面有毛病 11
其他。請註明 : _____ 12

[選項 10 只適用於接受電話諮商組的婦女們]

7.2. 我們的這份教材對幫助您決定要去做乳房攝影檢查的影響有多大？[讀出選項]

非常大..... 01
很大 02
有一些..... 03
只有一點 04
一點都沒有 05

[跳到第 8 題]

7.3. 您不想做乳房攝影檢查的原因是什麼? [可複選]

	是	否
7.3.1 沒有交通工具	01	02
7.3.2. 很難預約到看診時間	01	02
7.3.3 語言上的障礙（很難找得到會說英文的人陪我去做檢查）	01	02
7.3.4 沒有時間	01	02
7.3.5 我的醫師沒有建議要做	01	02
7.3.6 我不認為我會得到乳癌	01	02
7.3.7 我已經老了，指出原因_____	01	02
7.3.8 以前的檢查結果都是正常	01	02
7.3.9 很難為情	01	02
7.3.10 沒有或只有部分的醫療保險給付	01	02
7.3.11 等候做檢查時間太久	01	02
7.3.12 以前做乳房攝影檢查的經驗很不好	01	02
7.3.13 以前做乳房攝影檢查的經驗很痛	01	02
7.3.14 其他，請註明;_____	01	02

8. 請問您在未來的一年內有做子宮頸抹片檢查的計劃嗎？

有 01
沒有 (跳到 8.3.)..... 02
不確定/可能會，請註明原因_____.. 888

8.1. 是什麼因素使您決定去做子宮頸抹片檢查？ [可複選]

醫師的建議..... 01
已有定期做檢查的習慣 02
家人的鼓勵..... 03
報紙、雜誌得到的訊息..... 04
電視得到的訊息..... 05
朋友的鼓勵..... 06
保險有給付 07
有家族病史 08
看了您們給我的教材 09
經過和電話訪問員談過話以後 10
子宮頸有毛病 11
其他。請註明：_____ 12

[選項 10 只適用於接受電話諮商組的婦女們]

8.2. 我們的這份教材對幫助您決定要去做子宮頸抹片檢查有多大的影響？

非常大..... 01
很大 02
有一些..... 03
只有一點 04
一點都沒有 05

[跳到第 9 題]

8.3. 您不想做子宮頸抹片檢查的原因是什麼? [可複選]

	是	否
8.3.1 沒有交通工具	01	02
8.3.2. 很難預約到看診時間	01	02
8.3.3 語言上的障礙 (很難找得到會說英文的人陪我去做檢查)	01	02
8.3.4 沒有時間	01	02
8.3.5 我的醫師沒有建議要做	01	02

8.3.6 我不認為我會得到子宮頸癌 01 02
8.3.7 我已經老了，指出原因_____..... 01 02
8.3.8 以前的檢查結果都是正常 01 02
8.3.9 很難為情 01 02
8.3.10 沒有或只有部分的醫療保險給付..... 01 02
8.3.11 等候做檢查時間太久 01 02
8.3.12 以前做子宮頸抹片檢查的經驗很不好 01 02
8.3.13 其他，請註明;_____ 01 02

9. 請問您在未來有做腸癌檢查的 【腸癌檢查項目】的計劃嗎？

9.1 糞便潛血檢查
有 01
沒有 02
不確定/可能會，請註明原因_____..... 888

9.2 軟式乙狀結腸鏡檢查
有 01
沒有 02
不確定/可能會，請註明原因_____..... 888

9.3 大腸鏡檢查
有 01
沒有 02
不確定/可能會，請註明原因_____..... 888

[假如 9.1,9.2, 及 9.3 所有的回答都是〝沒有〞，跳到 9.6；任何一個或以上的回答〝有〞，則跳到 9.4]

9.4 是什麼因素使您決定去做腸癌檢查？ [可複選]

醫師的建議..... 01
已有定期做檢查的習慣 02
家人的鼓勵..... 03
報紙、雜誌得到的訊息..... 04
電視得到的訊息..... 05
朋友的鼓勵..... 06
保險有給付 07
有家族病史 08
看了您們給我的教材 09
經過和電話訪問員談過話以後 10
大腸方面有毛病 11
其他。請註明：_____ 12

[選項 10 只適用於接受電話諮商組的婦女們]

9.5 我們的這份教材對幫助您決定去做腸癌檢查有多大的影響？

非常大.....01
很大 02
有一些.....03
只有一點 04
一點都沒有 05

[跳到第 10 題]

9.6. 您不想做腸癌檢查的原因是什麼? [可複選]

	是	否
9.6.1 沒有交通工具	01	02
9.6.2. 很難預約到看診時間	01	02
9.6.3 語言上的障礙（很難找得到會說英文的人陪我去做檢查）	01	02
9.6.4 沒有時間	01	02
9.6.5 我的醫師沒有建議要做	01	02
9.6.6 我不認為我會得到腸癌	01	02
9.6.7 我已經老了，指出原因_____	01	02
9.6.8 以前的檢查結果都是正常	01	02
9.6.9 很難為情	01	02
9.6.10 沒有或只有部分的醫療保險給付	01	02
9.6.11 等候做檢查時間太久	01	02
9.6.12 以前做糞便潛血檢查的經驗很不好	01	02
9.6.13 以前做軟式乙狀結腸鏡檢查的經驗很不好	01	02
9.6.14 以前做大腸鏡檢查的經驗很不好	01	02
9.6.15 限制太多（飲食方面）	01	02
9.6.16 其他，請註明;_____	01	02

10. 以下是婦女對於做乳癌、子宮頸癌，及大腸直腸癌三種癌症檢查可能有的看法。 請告訴我您對這些敘述是非常贊同、贊同、不贊同、非常不贊同，沒意見，或是不知道。 [*Rakowski, 1997*]

敘述	非常贊同	贊同	沒意見	不贊同	非常不贊同	不知道
10. 1 如果您的醫師告訴您癌症檢查的重要性, 您會比較想要去做癌症檢查。	1	2	3	4	5	6
10. 2 定期做癌症檢查能讓您對您的健康感到放心。	1	2	3	4	5	6
10. 3 您耽心做癌症檢查，很有可能導致不必要的手術。	1	2	3	4	5	6
10. 4 即使家中沒有人得過癌症, 還是有必要做癌症檢查。	1	2	3	4	5	6
10. 5 假如您的醫師好像不確定是否您需要做癌症檢查, 您可能不會想做。	1	2	3	4	5	6
10. 6 假如癌症檢查發現了不正常, 那麼不管做什麼都於事無補。	1	2	3	4	5	6
10. 7 假如您吃的食物很健康, 那麼您得到癌症的機會就會降低很多, 您可能就不需要去做癌症檢查。	1	2	3	4	5	6
10. 8 對像您這樣年紀的婦女來說，癌症檢查並不重要。	1	2	3	4	5	6
26. 9 一旦您有幾次正常的癌症檢查結果, 之後的幾年就不需要再做了。	1	2	3	4	5	6
10. 10 除非有症狀出現或感到不舒服，您大概不會想去做癌症檢查。	1	2	3	4	5	6
10. 11 癌症檢查可以在癌症最有可能被治好的時候就發現。	1	2	3	4	5	6
10. 12 癌症檢查並沒有像大家說得那麼重要。	1	2	3	4	5	6
10. 13 您可能不會做癌症檢查，除非您的醫師提醒您。	1	2	3	4	5	6
26. 14 每一兩年做一次癌症檢查使您覺得您能夠掌握自己的健康。	1	2	3	4	5	6
10. 15 假如醫師或護士幫您檢查過您的乳房, 您就不需要去做乳房攝影檢查了。	1	2	3	4	5	6
26. 16 每一年或二年做一次乳房攝影檢查，對您是最有幫助的。	1	2	3	4	5	6
10. 17 子宮頸抹片檢查很快就可以做好了，做這種檢查不是一種困擾。	1	2	3	4	5	6
10. 18 子宮頸抹片檢查能夠在癌症尚未發展之前，就能發現問題。	1	2	3	4	5	6
10. 19 子宮頸抹片檢查的結果並不可靠，因為有些檢驗室做的檢查比其他檢驗室來的好。	1	2	3	4	5	6
26. 20 每一年或二年做一次子宮頸抹片檢查，對您是最有幫助的。	1	2	3	4	5	6
10. 21 停經後的婦女不需要經常做子宮頸抹片檢查。	1	2	3	4	5	6
10. 22 在婦女停止生育之後，她們不需要做子宮頸抹片檢查。	1	2	3	4	5	6
10. 23. 做糞便潛血檢查要您自己取得糞便樣本，真是噁心。	1	2	3	4	5	6
10. 24 大腸鏡檢查前要吃瀉藥幫助排便，讓您覺得很不舒服。	1	2	3	4	5	6
10. 25 做腸癌檢查前很多東西都不能吃，真是麻煩。	1	2	3	4	5	6

SA=非常贊同; A=贊同; N=沒意見; DA=不贊同; SD=非常不贊同

11. 從上次我們打電話給您後，您的健康醫療保險有變更過嗎？

是 01
否 (跳到第四部分) 02

11.1 您現在投保的是哪一種健康醫療保險計劃呢? [可複選]

聯邦醫療保險 (Medicare) 01
低收入戶/傷殘者醫療保險 (Medicaid) 02
聯邦醫療保險 (Medicare) 及 Supplemental（附加保險） . 02
一般醫療保險組織 (HMO) 03
其他私人保險 (Private insurance)如 PPO, fee-for-service . 04
其他，_____ 05
沒有健康醫療保險 (跳到第四部份) 06

11.2 您需要自己掏腰包去給付做癌症檢查的費用嗎 (不包括每次看診時支付$10 到 25 美元自付額)？

	是	否
11.2.1 乳房攝影檢查	01	02
11.2.2 子宮頸抹片檢查	01	02
11.2.3 糞便潛血檢查	01	02
11.2.4 軟式乙狀結腸鏡檢查	01	02
11.2.5 大腸鏡檢查	01	02

第四部份 健康狀態

下面的問題是關於您對自己健康的看法。這些資訊將會幫助您記錄您的感受和您從事平常活動的能力。

1. **整體來說，您認為自己在過去一年內的健康狀況如何？[請在最能描述您的答案的方格內填上 X 號。]**

極好	很好	好	一般	不好	很不好
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6

2. **在過去一年內，身體健康問題限制您平常體力活動的程度如何？**

完全沒有	很少	有-些	相當多	無法從事體力活動
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

3. **在過去一年內，您因為身體健康問題，不論是在家及出外，您從事您的日常工作有多少困難？**

完全沒有	少許	有一些	相當多	無法從事日常工作
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

4. **在過去一年內，您身體疼痛的程度？**

完全沒有	很輕微	輕微	中度	嚴重	很嚴重
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6

5. **在過去一年內，您有多少精力?**

很充沛	相當多	有一些	少許	完全沒有
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

6. **在過去一年內，您的身體健康或情緒問題限制您與家人或朋友的平常社交活動的程度?**

完全沒有	很少	有一些	相當多	無法從事社交活動
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

7. **在過去一年內，您被情緒問題（例如，感覺焦慮、沮喪或煩躁）困擾的程度?**

完全沒有	輕微	中度	相當多	極度
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

8. **在過去一年內，您因個人或情緒問題讓您無法從事您的平常工作，學校或其他日常活動的程度?**

完全沒有	很少	有一些	相當多	無法從事日常活動
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

第五部份 健康需求調查

1. 假如有一系列用中文介紹關於健康方面的講座，像是防癌方面的主題，您會參加嗎？

會 ..... 01(跳到 1.2)

不會 ..... 02 (跳到 1.1)

1.1 假如不會，請問您不參加的原因是？ [請選擇所有可能的原因]

沒時間 01
沒興趣 02
沒有交通工具 或 沒有人帶您去 03
沒人看顧小孩 04
必須工作 05
身體很健康 06
其他 _____ 07

〔跳到第 2 題〕

1.2. 這些講座在什麼地方舉辦，對您參加比較方便？ [請勾選所有適當的地方]

華人的社區活動中心 (例如: 美京華人活動中心或其他華人社團)... 01
社區活動中心 (Community Center) 02
老人活動中心 (Senior Center) 03
教堂 04
老人公寓(例如:華樂大廈或凱仁社) 05
中文學校 06
其他 _____ 07

2. 您家中有錄影帶的放映機 (VCR) 或播放影碟的放映機 (DVD player)嗎？

有錄影帶的錄影機 (VCR)..... 01
有影碟的放映機 (DVD)..... 02
有錄影帶的錄影機 (VCR)及影碟的放映機 (DVD)..... 03
都沒有 04

3. 假如我們提供您與健康有關的中文錄影帶或影碟，您會看嗎？

會 01

不會 02

3.1 如果不會，請問您的原因是？[請選擇所有可能的原因]

沒時間 01
沒興趣 02
沒有錄影機 03
必須工作 04
身體很健康 05
其他 _____ 06

4. 在錄影帶或影碟中，您覺得什麼形式的劇情最有效的介紹防治癌症的重要性和方法？[請勾選所有您推薦的方式]

健康教育專家或醫護專業人員的講解 01
以真實故事的形式 02
訪問癌症病患或家屬 03
小組討論的形式 04
邀請名人主持討論和介紹故事 05
其他 _____ 06

5. 如果送您一張電腦光碟片，內容是和健康有關的故事和資訊。您會使用家中、工作、或圖書館的電腦來閱讀它嗎？

會 01

不會 ..... 02 [跳到 5.1]

5.1 如果不會，請問您的原因是？[請選擇所有可能的原因]

不會使用電腦 01
家中沒有電腦 02

工作地方不方便看 03
不喜歡使用電腦 04
不會去圖書館使用電腦 05
沒時間 06
沒興趣 07
其他 _____ 08

6. 您的電腦有網路嗎?

有 ..... 01 [跳到 6.1]
沒有 [停住] 02

6.1 您會上網去閱讀與健康有關的資訊嗎?

會 [停住，跳到結語] 01
不會 ..... 02 [跳到 6.2]

6.2 如果不會，請問您的原因是？[請選擇所有可能的原因]

不會使用電腦 01
家中沒有電腦 02
不喜歡閱讀網路上的資料 03
沒時間 04
沒興趣 05
其他 _____ 06

[結語]

非常感謝您花時間完成我們的訪談。您已經幫助了我們去幫助其他的婦女們，就像我們幫助您一樣。我
們會在一年左右再打電話給您，看看您是不是一切都很順利。很高興能夠和您談話。假如您對這項研究有任何問題，請向喬治城大學陳美玉女士聯絡，她的電話是 (202) 687-0155。

謝謝。再見。

Appendix B

Manuscript: Developing and validating a measure of Chinese cultural views of health and cancer

Developing and Validating a Measure of Chinese Cultural Views of Health and Cancer

Submitted by

Wenchi Liang, DDS, PhD[1]

Judy H. Wang, PhD[1]

Mei-Yuh Chen, MS[1]

Shibao Feng, PhD[1]

Bin Yi, MS[1]

Marion M. Lee, PhD[2]

Marc D. Schwartz, PhD[1]

Rena J. Pasick, PhD[3]

Jeanne S. Mandelblatt, MD, MPH[1]

1 Cancer Control Program, Lombardi Comprehensive Cancer Center, Georgetown University
2 Department of Epidemiology, University of California at San Francisco
3 University of California at San Francisco Comprehensive Cancer Center

For Correspondence, please contact:

Wenchi Liang, DDS, PhD
2233 Wisconsin Ave., NW, Suite 440
Washington, DC 20007
(202) 687-8937 (voice)
(202) 687-0305 (fax)
liangw1@georgetown.edu

ABSTRACT

BACKGROUND: Cultural values affect cancer screening, yet few instruments exist to measure them in ethnic minorities. This study was designed to develop and validate quantitative scales that measure Chinese cultural views about health and illness.

METHODS: Chinese-American women (N=438) aged 50 and older completed a telephone interview on culture and cancer screening. Cultural views were assessed by a 30-item, 5-point Likert scale. Cultural sub-scales were identified using principal component analysis and validated by their associations with age at immigration and breast, cervical, and colorectal cancer (CRC) screening patterns.

RESULTS: Factor analysis yielded seven cultural sub-scales--fatalism, hot-cold balance, use of herbs, self-care, medical examination, lifestyle, and Western medicine. Reliability of the sub-scales was moderate to high (alphas between 0.39 and 0.82). Except for lifestyle, medical examination, and Western medicine sub-scales, cultural factors were significantly associated with age at immigration ($p<0.001$). Fatalism, self-care, and medical examination sub-scales consistently predicted non-adherence to breast, cervical, and CRC screening recommendations.

CONCLUSIONS: Our findings suggest that Chinese cultural views consist of at least seven domains and may influence older women's use of mammography, Pap tests, and CRC screening tests. Future research is needed to refine and validate these scales in large samples of Chinese Americans.

KEY WORDS: Culture, Asian Americans, Women's Health, Acculturation, Mass Screening, Mammography, Vaginal Smears, Occult Blood, Colonoscopy, Sigmoidoscopy

PRECIS

Data from 438 older Chinese American women indicate that Chinese cultural views consist of at least seven domains and these views influence women's breast, cervical, and colorectal cancer screening practice.

INTRODUCTION

Cultural values have been found to affect cancer communication and screening in several ethnic minority populations. For instance, culturally based fatalistic views about cancer have been reported in African Americans,[1-3] Latinos,[4-5] and Asian Americans.[6-7] Fatalism has also been associated with non-attendance at free breast cancer screening programs for a predominantly Chinese population in Singapore,[8] use of Pap tests in Cambodian and Latina Americans,[4,9] and use of fecal occult blood testing in African Americans.[10] In addition, other culture-specific practices and beliefs, such as use of traditional healers and modesty, have been associated with non-use of screening mammography in Filipino- and Korean-American women.[11]

Traditional cultural beliefs and values are strongly held, particularly among older Chinese Americans.[12] These factors may play a significant role in cancer screening use among older Chinese Americans. Passivity and subordination, for example, are cultural characteristics of traditional Chinese women that can render inappropriate even talking about screening of the cervix or breasts.[12-13] Qualitative research suggests that these values may keep Chinese individuals from seeking Western medicine for help, and they influence conceptions of illness and cancer.[7,12-16]

Although cultural views and values are likely to influence cancer beliefs, attitudes, and behaviors in Chinese Americans, no studies have systematically examined the impact of culture on cancer screening for this ethnic group. One reason for this gap is the lack of valid measures. The limited qualitative data to date suggest that traditional Chinese cultural views may include several constructs, such as fatalism, modesty, and self-care to avoid medical visits,[7,12] and cannot be simply represented by one or a few items. Validated and more comprehensive measures of

culture are needed to understand the influence of cultural views on cancer screening, particularly in light of other known factors, such as physician recommendation and health insurance.[17-19] Although lack of physician recommendation and health insurance have been found to be important barriers to cancer screening, but they cannot explain all variability in screening behavior. Cultural factors, if measured appropriately, will help address this gap in knowledge.

This study was designed to develop and validate quantitative scales to measure Chinese cultural views about health and illness. Items measuring cultural views were derived mainly from focus group data of older Chinese American women.[7] We hypothesized that Chinese cultural views comprise several domains, are measurable, and are associated with level of acculturation. We also hypothesized that these factors independently and collectively influence Chinese American women's breast, cervical, and colorectal cancer screening behaviors.

METHODS

This cross-sectional study was part of a larger randomized controlled trial to improve cancer screening use in Chinese American women. The study protocol was approved by the Institutional Review Board at Georgetown University. Data on cultural views and cancer screening were collected through telephone interviews of Chinese American women recruited from local Chinese communities.

Population, Setting, and Eligibility

The study population was Chinese American women residing in the metropolitan Washington D.C. area. Eligibility criteria included being 50 and older and ability to communicate in Mandarin, Cantonese, Taiwanese, or English. Women who were short-term visitors (i.e. those who planned to stay in the U.S. for less than a year) were excluded because a

long-term follow-up is planned to assess use of cancer screening at 15 months following educational interventions and visitors usually do not receive preventive health care in the U.S.

Recruitment and Data Collection

A convenience sample of participants was recruited from several community-based venues, including Chinese churches, senior centers, health fairs, celebration banquets of Chinese organizations, and Chinese print media. Typically, leaders of the organizations endorsed the project and introduced the research team to the congregation or group. The research team then presented a brief overview of the project, including timeline of assessments, receipt of cancer educational materials, and risks and benefits of participation. Women were encouraged to participate because their views about health and cancer and experiences in preventive care would help understand the needs for cancer control Chinese American women. Interested women were asked to provide a written consent and leave their contact information. Other strategies supplementing the group recruitment method included announcements in church bulletins, invitational flyers or announcements distributed to community organization members, and advertisements posted in local Chinese newspapers and grocery stores. Those women who contacted the research team and expressed their interest in participating in this study were required to mail back a signed consent form. Women providing the written consent received a bottle of brand-name multi-vitamin supplement either on site or by mail as a token of appreciation for participation. Consenting women were then contacted for a 30-minute computer-assisted telephone interview (CATI) by trained Chinese American interviewers. Interviewers received a one-day training first to get familiar with the survey and CATI system, and their initial interviews were supervised by investigators until they could fluently perform the tasks and handle participants' questions well. Eight people conducted the interviews, including

four Mandarin-speaking graduate students, one research assistant fluent in Mandarin and Taiwanese, and three Cantonese-speaking independent contractors. All, except for one student, were females. The majority of the interviews were conducted in Mandarin. Women who did not speak Mandarin were interviewed in their preferred dialects, such as Cantonese and Taiwanese.

Measures

The telephone survey included questions about demographics, health care access and utilization (e.g., regular doctor, prior cancer screening experience, and health insurance), cultural views on health and illness, and knowledge and attitudes towards cancer screening. Women's Chinese cultural views were assessed by 30 items (Table 1). These items were primarily derived fromqualitative data of five focus groups consisting of 54 older Chinese American women who were asked about their views of health, illness, cancer, and cancer screening.[7] In addition, Chen's theory of Chinese American elders' view of health and illness[20] and existing measures, such as beliefs in the balance of "yin and yang" and fatalism[21-22] were incorporated. Responses to each item were assessed on a 5-point Likert scale, ranging from "strongly agree," "agree," "neutral," "disagree," to "strongly disagree." A proxy for acculturation was the question about immigration history: "How old were you when you came to live in the U.S.?"

Women's history of participation in screening for breast cancer (mammography), cervical cancer (Pap tests), and colorectal cancer (fecal occult blood test, sigmoidoscopy, or colonoscopy) was measured by questions regarding whether they ever had each kind of screening test, the date of the most recent test, and the interval between the two most recent tests.[23] The stages of screening for breast and cervical caner were categorized as *regular* or *non-regular*. Regular screeners included women who had a mammogram and a Pap test in the past year and had a previous mammogram and a Pap test within two years prior to the most recent test. Women who

had mammograms or Pap tests beyond this time frame or who never had the tests were considered non-regular screeners. The stage of colorectal cancer screening was characterized into two categories as *current* and *non-current*. Based on the recommendations from American Cancer Society,[24] women who had a fecal occult blood test (FOBT) within a year, a sigmoidoscopy within 5 years, or a colonoscopy within 10 years were defined as current screeners. Women were considered non-current screeners if they ever had a colorectal cancer screening test but beyond the recommended intervals or never had any of the three tests. Women were also asked about whether they underwent each screening test for health reasons (i.e., due to symptoms) or for routine checkups. Women who had undergone the tests for diagnostic reasons were excluded from subsequent analyses.

Analyses

Since it is likely that cultural views include different domains of cultural components,[7,12] we expected that there would be common factors representing higher-order relationships among the 30 cultural items and that some of these relationships might be collinear. Therefore, principal component factor analysis was used to explore the number and composition of factors that accounted for the interrelationships among the 30 cultural items. SAS statistical software was used to conduct the analyses. Factor rotation and inter-factor correlations were allowed by using the Promax rotation option. Factors were extracted if their eigenvalues were greater than 1. Items with loading values equal to, or greater than 0.4 were retained in corresponding factors.

Internal consistency of items retained in each factor was then examined using Cronbach's alpha. If the overall Cronbach's alpha could be improved by 0.05 or more by eliminating individual items in the factor, these items were dropped from the factor. After determining a final set of items for each factor, items were summed to create the individual cultural sub-scales.

For ease of interpretation, individual item scores were recoded before summing so that higher scores represented higher Eastern cultural views of health care. The overall 30-item sum score and the sum score of all cultural sub-scales were also calculated and compared to sum scores of individual sub-scales. Next, sum scores were standardized to a range from 0 to100 points. Records with missing values in more than one-third of the items within one factor were excluded from analyses; otherwise, the prorated factor sum scores were used to maximize the number of subjects in the analyses.

The concurrent validity of these cultural scales was evaluated by their associations with length of time in the US. The predictive validity was examined by associations between cultural sub-scales and cancer screening behaviors. T-tests were used to examine differences in sum scores of individual cultural factors and the overall 30-item scale between women at different screening stages. If sum scores were not normally distributed, non-parametric Wilcoxon tests were used to examine the differences.

RESULTS

Characteristics of the study sample

Of the 533 women who expressed initial interest in participation, 470 (88.2%) completed a written consent. Of the 470 consenting women, 32 did not complete the telephone interview because of lack of interest when contacted again (N=15), ineligibility (N=7) or they stated they were too busy for the interview (N=3), felt uncomfortable talking about cancer (N=3), or they could not be contacted for an interview (N=4). Overall, 438 (82.2% of 533) Chinese women constituted the final study sample. About 22% of participants were recruited from Chinese churches, 16% from senior centers or senior assisted living buildings, 37 % from other Chinese community organizations (e.g., alumni associations, community service organizations, and book

and dance clubs), 12% from health fairs, and 13% from media or referrals from friends who either participated in or supported this study. Eighteen interviews (4.1%) were administered face-to-face in senior centers (n=14), Chinese schools (n=2) or participants' homes (n=2) because of difficulty in completing the interview over the phone or in reaching the participants by telephone. In addition, 3 participants completed the baseline survey and returned them by mail because they were too busy to set aside time for a telephone interview. A few interviews were conducted in languages other than Mandarin: Twenty-five were conducted in Cantonese, five in Taiwanese, and four in Fuzhou, and two in English.

Of the 438 participants, 437 were foreign born. The only woman born in the U.S. was raised up in a Chinese-speaking environment. Among the foreign born women, sixty-one percent were born in China, 3% in Hong Kong, 31% in Taiwan, and 5% in other countries including Singapore and Vietnam. The mean age of the sample was 64 years (standard deviation, SD = 9 years; range: 50 to 89 years). The majority of participating women had a college degree or higher (71%), had health insurance (80%), and was married (73%). Thirty-nine percent were employed. The mean age upon immigration was 42 years (range: 0 to 80 years). Fifty percent of the participants regularly obtained mammograms or Pap tests, and 75.8% ever obtained at least one of the three colorectal cancer screening tests (i.e., FOBT, flexible sigmoidoscopy, and colonoscopy).

Factor analysis results

Results from principal components analysis initially extracted 9 factors. We reviewed the loadings of items and considered the theoretical connection between items within factors. Items that either loaded less than 0.40 in any of the factors or had theoretically weak associations with other items in the factor were eliminated for the analyses. For instance, the item describing

avoidance of medical visits in order not to become sick or have bad luck (BAD_LUCK) was deleted due to low loading values on any of the factors. Items on eating prepared food (FOOD_KEY) and body type and illness (BODY_CAN) were clustered together at 0.58 and 0.76 and form one factor, but this factor was excluded because no meaningful construct could emerge from these two items. The item about Qi-Kung or Tai-chi practice (QI_KUNG), loaded at 0.82, was not considered for further analyses because it was the only significantly loaded item in that factor.

After these deletions, data were analyzed again using principal components analysis with Promax rotation. The results showed that the remaining 26 items significantly loaded on seven common factors (Table 2). The first factor contained nine items, all of which were related to individuals' perception that health and illness are predetermined and beyond their control. This factor was labeled as "fatalism." "Use of herbs" contained three statements about the advantage of using Chinese herbal medicine to stay healthy; "self-care" contained three statements that emphasized taking care of one's self as opposed to depending on doctors; "lifestyle" represented the notion of keeping healthy through outdoor exercise, balanced diet, regularity, and maintaining emotional stability. "Medical examination" contained statements about negative perceptions about medical examination. "Hot-cold balance" represented the belief about the importance of a hot-cold balanced diet in health maintenance. "Western medicine" consisted of two items about negative impressions of Western medicine--the use of chemical components that may harm the body and the inability to prevent disease. After rotation, the seven factors were distinct from each other and the correlations between the factors were low to moderate (Table 3). Analyses using an orthogonal rotation (i.e., Varimax rotation in the SAS program) yielded the same seven factors.

Reliability (internal consistency)

The statement "I know my body better than any one else (BDY_BEST)" was eliminated from the "self-care" factor since dropping this item increased the inter-item correlation for this sub-scale (Cronbach's alpha) from 0.63 to 0.73. The reliability of the overall 30-item and the final seven- factor (25 items) sum scores were 0.79 and 0.80, respectively (Table 4). The Cronbach's alphas in the "fatalism" and "self-care" factors were 0.82 and 0.73, respectively, which was about the same level of those in the overall and seven-factor sum scores. The intra-item correlations among items in the "use of herbs" and "lifestyle" factors were moderate (Cronbach's alpha= 0.69 and 0.59, respectively), but were low in the "hot-cold balance," "medical examination" and "Western medicine" factors (Cronbach's alpha=0.53, 0.42, and 0.39, respectively).

Concurrent validity

Except for "lifestyle," "medical examination" and "Western medicine" factors, individual factor and overall sum scores were significantly associated with participants' age upon immigration to the U.S. (Spearman correlation coefficient between 0.17 and 0.34, $p<0.001$); women who held stronger Chinese cultural views were more likely to have come to the U.S. in the later years of their life (Table 4).

Preliminary predictive validity

The seven-factor (25 items) sum scores and overall 30-item sum scores significantly differentiate women of different breast, cervical, and colorectal cancer screening stages (Table 5): women who did not obtain regular mammography and/or regular Pap tests were likely to have a more traditional Chinese cultural views than those having regular mammography and/or

Pap tests (t-tests, $p<0.0001$). Similarly, those whose colorectal cancer screening tests were not current held a more traditional cultural view than those never having or having current colorectal cancer screening (t-test, $p<0.01$).

Of the seven cultural scales, fatalism and self-care were the two strongest factors differentiating women having regular and non-regular breast and/or cervical cancer screening tests. Women who did not adhere to breast and cervical cancer screening recommendations were more likely to have a fatalistic view, to emphasize self-care, and to ignore the importance of medical checkups ($p<0.0001$). The "use of herbs," "hot-cold balance," and "medical examination" factors had a similar effect on breast and cervical cancer screening as those found in the "fatalism" and "self-care" factors, but with a lesser degree of significance. Similar to those found in breast and cervical cancer models, the "fatalism" and "self-care" factors were associated with colorectal cancer screening, with the non-current screeners having higher mean scores than current screeners (45.1 and 50.7, compared to 38.8 and 40.0; t-tests, $p<0.001$).

Analyses of the associations between the five items not included in any of the factors and cancer screening show that women who believe that if a woman visits clinics too often, she will catch diseases and have bad luck (BAD_LUCK) were less likely to obtain regular mammograms and Pap tests (Wilcoxon tests, $p<0.01$). Also, a positive attitude toward Qi-Kung and Tai-Chi in preventing disease (QI_KUNG) was associated with non-regular mammography use (Wilcoxon test, $p<0.01$).

DISCUSSION

To our knowledge, this is the first study to develop a measure of Chinese cultural views on health and illness and to validate cultural scales by testing their association with Chinese women's breast, cervical, and colorectal cancer screening. Our findings suggest that Chinese

cultural views consist of at least seven domains thatmay influence older women's use of cancer screening tests to differing degrees.

Predictive validation tests further indicate that the values captured by these seven cultural sub-scales have different degrees of influence in Chinese women's cancer screening behaviors. The significant relationship between the fatalism sub-scale and breast and cervical cancer screening in our Chinese population was consistent with prior research on the effect of fatalism on cancer screening in other Asian, African American, and Latino populations.[4,8-10] The consistently strong association between fatalism and screening outcomes is likely also a reflection of the higher internal consistency of this subscale relative to the other subscales described here.

Although exercise, diet, and the emphasis on social and emotional health clustered together, these "lifestyle" values did not predict cancer screening. However, more specific concepts about food, such as the importance of choosing the right food to maintain the hot and cold balance of the body, were associated with cancer screening behaviors. In Chinese culture, foods are labeled as hot or cold based on their effects on the body, not necessarily by the temperature when served. People with a hot body type need to consume cold food (e.g., Napa cabbage and mung beans), and those who are weak or feel cold need hot food (e.g., beef and ginger). This concept is influenced by the teaching of Taoism, which divides the universe into two opposite characters--"yin" and "yang." "Yin" is cold, dark, passive, and weak, whereas "yang" denotes the hot, light, active, and strong side of a person.[12] The ability to balance "yin (cold)" and "yang (hot)" is considered the optimal way to achieve health and prosperity. Women who believed in the hot-cold balance of the body had impression that they were healthy

as long as their diet was balanced. This culture-specific belief may explain why these women were less likely to adhere to breast and cervical cancer screening guidelines.

We found associations between adverse impressions of Western medical examinations (embarrassment, lots of unnecessary tests, and intrusiveness) and non-adherence to regular breast and cervical cancer screening. This result is consistent with limited studies that have found that the invasive nature of Western medical approaches keep some Chinese women from seeking recommended care.[25]

Although some cultural sub-scales show significant associations with colorectal cancer screening behavior, the associations are moderate compared to those found with breast and cervical cancer screening. It is possible that the influences of cultural factors on cancer screening are more evident in screening adherence, a stage that is not available in our current colorectal cancer screening data. In addition, subset analyses of our data show that women whose colorectal cancer screening tests were not current had the highest cultural scores than those having current tests or never having any tests. It is likely that traditional Chinese cultural views keeps women from repeating screening tests, and that other reasons, such as lack of knowledge about screening recommendations, also contribute to women's never having any colorectal cancer screening.

Several limitations of this study should be considered when interpreting the results. First, the 30-item cultural view scales were developed primarily from responses of Chinese American women aged 50 and older to questions regarding their perceptions about health and illness/cancer and their experiences in health care in the U.S..[7] It is possible that other aspects of cultural views held by Chinese Americans were not captured. However, if these seven domains of cultural views can remain stable after being tested in different groups of Chinese women, it is unlikely

that any unidentified domains will alter the relationships between these seven factors and cancer screening. Second, except for the fatalism scale, these cultural scales only included two to three items, which may partly explain moderate to low intra-item reliability among items in these sub-scales. Future research is needed to improve reliability of these specific cultural scales. One possible method is to add more items describing specific cultural views, and to test in larger samples whether items of the same constructs will cluster together and improve internal consistency. Third, the low reliability of several of the subscales likely attenuated their associations with our screening outcomes. Despite the low reliability of several subscales, the overall scale had acceptable reliability. Thus, some investigators may wish to consider using the overall scale score rather than focusing on individual subscales. Fourth, the generalizability of this study is limited by the use of a convenience sample drawn mainly from Chinese community organizations, churches, and senior centers. Although mass media were used to encourage participation, relatively small numbers of women participated through this channel. Therefore, women who did not attend any activities or programs held by Chinese organizations, such as restaurant workers or those speaking in other Chinese dialects, are likely to be underrepresented in our sample. Cultural patterns as well as their associations with cancer screening behaviors may be different if these people are included. The stability and generalizability of the cultural scales needs to be tested in men and Chinese populations in other geographic areas. In addition, measures of cancer screening behaviors are subject to self-report bias.

Despite these limitations, our findings of the associations between cultural views and cancer screening practice have important implications for research and practice. Cancer screening programs targeting Chinese women may be more successful if they acknowledge women's cultural barriers and include messages that address those cultural factors. Research is

needed to explore how the concept of early detection can be accepted by women holding a fatalistic outlook. Likewise, health care providers should be sensitive to the cultural values of their Chinese patients, especially those who are older immigrants, and address their concerns that may keep them from following advice to get mammograms and Pap tests. Studies should explore prospects for education and/or counseling interventions that would improve Chinese women's cancer screening adherence in large representative samples. In addition, since screening behaviors are also influenced by other factors, such as knowledge about cancer and cancer screening, perceived risks of getting cancer, physician recommendations, and health insurance coverage, it is necessary to test whether the relationships between cultural views and cancer screening still hold true after considering those important mediating factors.

ACKNOWLEDGMENTS

This study is supported by funding from the Susan G. Komen Breast Cancer Foundation Population Specific Research Grant (#POP0100855, Liang W), the National Cancer Institute Career Development Award (1K07 CA90352, Liang W), U.S. Department of Defense (BC010208, Wang JH), and the National Cancer Institute K05 (Mandelblatt JM).

REFERENCES

1. Jennings KM. Getting a Pap smear: focus group responses of African American and Latina women. Oncol Nurs Forum 1997;24:827-35.

2. Phillips JM, Cohen MZ, Moses G. Breast cancer screening and African American women: fear, fatalism, and silence. Oncol Nurs Forum 1999;26:561-71.

3. Shankar S, Selvin E, Alberg AJ. Perceptions of cancer in an African-American community: a focus group report. Ethn Dis 2002;12:276-83.

4. Chavez LR, Hubbell FA, Mishra SI, Valdez RB. The influence of fatalism on self-reported use of Papanicolaou smears. Am J Prev Med 1997;13:418-24.

5. O'Malley AS, Renteria-Weitzman R, Huerta EE, Mandelblatt J. Latin American Cancer Research Coalition. Ethn Dis 2002;12:383-91.

6. Lee MC. Knowledge, barriers, and motivators related to cervical cancer screening among Korean-American women. A focus group approach. Cancer Nurs 2000;23:168-75.

7. Liang W, Yuan EH, Mandelblatt JS, Pasick RJ. How Chinese women view health and cancer screening? Results from focus groups and implications for intervention. Ethnicity and Health 2004;9:283-04.

8. Straughan PT, Seow A. Attitudes as barriers in breast screening: a prospective study among Singapore women. Soc Sci Med 2000;51:1695-1703.

9. Taylor VM, Schwartz SM, Jackson JC, et al. Cervical cancer screening among Cambodian-American women. Cancer Epidemiol Biomarkers Prev 1999;8:541-6.

10. Powe BD. Fatalism among elderly African Americans. Effects on colorectal cancer screening. Cancer Nurs 1995;18:385-92.

11. Maxwell AE, Bastani R, Warda US. Mammography utilization and related attitudes among Korean-American women. Women Health 1998;27:89-107.

12. Mo B. Modesty, sexuality, and breast health in Chinese-American women. West J Med 1992;157:260-4.

13. Hoeman SP, Ku YL, Ohl DR. Health beliefs and early detection among Chinese women. Journal of Nursing Research 1996;18:518-33.

14. Ma GX. Between two worlds: the use of traditional and western health services by Chinese immigrants. J Community Health 1999;24:421-37.

15. Yamashiro G, Matsuoka JK. Help-seeking among Asian and Pacific Americans: a multiperspective analysis. Soc Work 1997;42:176-86.

16. Vu HH. Cultural barriers between obstetrician-gynecologists and Vietnamese/Chinese immigrant women. Tex Med 1996;92:47-52.

17. Urban N, Anderson GL, and Peacock S. Mammography screening: how important is cost as a barrier to use? Am J Public Health 1994;84:50-5.

18. McCarthy BD, Yood MU, MacWilliam CH, and Lee MJ Screening mammography use: the importance of a population perspective. Am J Prev Med 1996;12:91-5.

19. Fox SA, Siu AL, and Stein JA The importance of physician communication on breast cancer screening of older women. Arch Intern Med 1994;154:2058-68.

20. Chen YL. Conformity with nature: A theory of Chinese American elders' health promotion and illness prevention processes. Adv Nurs Sci 1996;19:17-26.

21. Lee MM, Lee F, Stewart S. Pathways to early breast and cervical detection for Chinese American women. Health Educ Q 1996;23:S76-S88.

22. Lannin DR, Matthews HF, Mitchell J, Swanson MS, Swanson FH, Edwards MS. Influence of socioeconomic and cultural factors on racial differences in late-stage presentation of breast cancer. JAMA 1998;279:1801-7.

23. Rakowski W, Fulton JP, Feldman JP. Women's decision making about mammography: a replication of the relationship between stages of adoption and decisional balance. Health Psychol 1993;12:209-14.

24. Smith RA, Cokkinides V, Eyre HJ. American Cancer Society. American Cancer Society guidelines for the early detection of cancer, 2004. CA Cancer J Clin 2004; 54:41-52.

25. Ma GX. Barriers to the use of health services by Chinese Americans. J Allied Health 2000;29:64-70.

Appendix C

Preliminary results (Tables 1 and 2)

Table 1

Percentage Differences in Measured Variables and Outcomes among Never, Ever, and Regular Screeners

Variables /outcomes	Never (n = 36)		Ever (n = 85)		Regular (n = 129)		*P* values
	No.	%	No.	%	No.	%	
Age							.0003
50 to 64 years old	14	38.89	41	48.24	90	69.77	
≤ 65	22	61.11	44	51.76	39	30.23	
Education							<.0001
≤ High school	23	63.89	32	37.65	14	10.85	
> High school	13	36.11	53	62.35	115	89.15	
Language							<.0001
High ability	1	2.78	19	22.35	65	50.39	
Low ability	35	97.22	66	77.65	64	49.61	
Martial status							.0881
Married	21	58.33	60	70.59	99	76.74	
Divorced/Widow/Single	15	41.67	25	29.41	30	23.26	
Employed							<.0001
Yes	4	11.11	26	30.59	70	54.26	
No	32	88.89	59	69.41	59	45.74	
Presence of a regular doctor							<.0001
Yes	20	55.56	60	70.59	118	91.47	
No	16	44.44	25	29.41	11	8.53	
Health insurance							<.0001
Yes	18	50	67	78.82	121	93.8	
No	18	50	18	21.18	8	6.2	
Physician recommendation							<.0001
Yes	7	19.44	32	37.65	95	73.64	
No	29	80.56	53	62.35	34	26.36	
[a]Access barrier							.0021
Yes	25	69.44	56	65.88	58	44.96	
No	11	30.56	29	34.12	71	55.04	
Risk of getting breast cancer							.1331
Likely	27	75	58	68.24	67	51.94	
Unlikely	9	25	27	31.76	62	48.06	
Worry about getting breast cancer							.0361
Not worry	31	86.11	69	81.18	89	68.99	
Worry	5	13.89	16	18.82	40	31.01	
[b]Perception of cancer screening	M= 52.41 (SD 10.54)		M = 56.29 (SD 8.24)		M = 62.85 (SD 6.57)		<.0001
[c]Cultural views of healthcare	M= 58.66 (SD 11.33)		M = 55.55 (SD10.43)		M = 50.55 (SD 9.18)		.0004

Note. [a]Access barrier presents participants' problems to access medical services including transportation, language, no or only partial insurance coverage, too many forms to fills, and too long waiting time.
[b]Perception reflects particpants' views about pros and cons of cancer screening such as mammography. Participants responded to a 14-items five-point Likert scale. Higher mean of sum scores on the scale indicates more positive views about cancer screening.
[a]Cultural views are continuous scores ranging from 0 to 100 points. M = mean; SD = standard deviation. High scores on cultural views indicate a more eastern view of care; low scores reflect a more western view of care.

Table 2

Bivariate Association between Sociodemographics, Medical Care Resources, Cancer Worry and Cultural Variables with Screening Outcomes (N = 250)

Variables	Whole Group	Control group (n = 125)		Intervention group (n = 125)		*P* values
	No.	No.	%	No.	%	
Age						.5217
50 to 64 years old	145	75	60	70	56	
≤ 65	105	50	40	55	44	
Education						.6712
≤ High school	69	33	26.4	36	28.8	
> High school	181	92	73.6	89	71.2	
Language						.5044
High ability	85	40	32	45	36	
Low ability	165	85	68	80	64	
Martial status						.3980
Married	180	87	69.6	93	74.4	
Divorced/Widow/Single	70	38	30.4	32	25.6	
Employed						.6056
Yes	150	73	58.4	77	61.6	
No	100	52	41.6	48	38.4	
Presence of a regular doctor						.2125
Yes	198	95	76	103	82.4	
No	52	30	24	22	17.6	
Health insurance						.7398
Yes	206	102	81.6	104	83.2	
No	44	23	18.4	21	16.8	
Physician recommendation						.1280
Yes	134	73	58.4	61	48.8	
No	116	52	41.6	64	51.2	
[a]Access barrier						.2519
Yes	139	74	59.2	65	52	
No	111	51	40.8	60	48	
Risk of getting breast cancer						.6043
Very unlikely	152	78	62.4	74	59.2	
	98	47	37.6	51	40.8	
Worry about getting breast cancer						.6587
Somewhat/often/a lot	61	32	25.6	29	23.2	
Not at all	189	93	74.4	96	76.8	
[b]Perception of breast cancer score	250	M = 59.14 (SD 8.54)		M = 59.10 (SD 9.05)		.5170
[c]Cultural views of healthcare	250	M = 53.61 (SD 9.81)		M = 53.22 (SD 10.97)		.2150

Note. [a]Access barrier presents participants' problems to access medical services including transportation, language, no or only partial insurance coverage, too many forms to fills, and too long waiting time.
[b]Perception reflects particpants' views about pros and cons of cancer screening such as mammography. Participants responded to a 14-items five-point Likert scale. Higher mean of sum scores on the scale indicates more positive views about cancer screening.
[a]Cultural views are continuous scores ranging from 0 to 100 points. M = mean; SD = standard deviation. High scores on cultural views indicate a more eastern view of care; low scores reflect a more western view of care.

Appendix D

Abstracts

How Culture Affects Regular Screening for Breast and Cervical Cancer Screening among Chinese-American Women

Liang W, Wang JH, Chen MY, Lee MM, Weinstein MA, Mandelblatt JS

PURPOSE: To establish specific dimensions of Chinese cultural views and investigate which specific views influence Chinese women's use of mammography and Pap tests.

METHODS: Three hundred Chinese-American women aged 50 and older completed telephone interview on culture and cancer screening. Cultural views were assessed by a 30-item, 5-point Likert scale. Regular screeners were defined as having had two mammograms and Pap tests at age-appropriate intervals. Principal component analysis was used to identify specific cultural factors. T-tests were used to compare the means of sum scores of each factor between regular and non-regular screeners.

RESULTS: Six cultural factors extracted were labeled: fatalism, hot-cold balance, use of herbal medicine, self-care, medical examination, and lifestyle (loading values ranging from 0.48 to 0.80). Non-regular screeners were more likely to believe in fatalism and hot-cold balance, and to value self-care over medical checkups than regular screeners ($p < 0.001$, $=0.016$, and < 0.001, respectively). Use of herbal medicine and negative feelings toward medical examination were marginally associated with non-adherence ($p=0.061$ and 0.070).

CONCLUSIONS: Certain aspects of Chinese cultural views shape Chinese women's cancer screening practice. Programs designed to counter notions of fatalism, hot-cold balance, and self-care are likely to improve cancer screening in this population.

ID: 104

How Culture Affects Regular Screening for Breast and Cervical Cancer among Chinese-American Women

Wenchi Liang, PhD; Judy H Wang, PhD; Mei-Yuh Chen, MS; Marion M Lee, PhD; Maxine A Weinstein, PhD; Jeanne S Mandelblatt, MD, MPH

BACKGROUND: Breast cancer causes most of the cancer death among Chinese American women, and this population has higher cervical cancer mortality than white women. Both cancers can be effectively detected early by mammography and Pap tests. However, screening rates among Asian Americans and Pacific Islanders remain the lowest among all U.S. ethnic groups and limited data show that Chinese American women are less likely to receive a mammogram than other Asian American women.

PURPOSE: To establish specific dimensions of Chinese cultural views and investigate which specific views influence Chinese women's regular use of mammography and Pap tests.

METHODS: A total of 335 Chinese American women aged 50 and older recruited from Chinese churches, senior centers, and organizations in the Washington D.C. area completed telephone interview on culture and cancer screening. Cultural views were assessed by a 30-item, 5-point Likert scale developed using community-based focus group data. Regular screeners were defined as having had two mammograms and Pap tests at age-appropriate intervals. Principal component analysis was used to identify specific cultural factors. Sum scores of items loaded in each factor were used to represent women's cultural views. T-tests and non-parametric tests were used to compare the differences in each cultural score between regular and non-regular users of mammograms and Pap tests.

RESULTS: Six cultural factors extracted were labeled as fatalism, hot-cold balance, use of herbal medicine, self-care, medical examination, and lifestyle. Non-regular screeners were more likely to believe in fatalism and and to value self-care over medical checkups than regular screeners. Negative feelings toward medical examination were marginally associated with non-adherence.

IMPILICATIONS: Certain aspects of Chinese cultural views shape Chinese women s cancer screening practice. Programs designed to counter notions of fatalism, hot-cold balance, and self-care are likely to improve cancer screening in this population.

American Public Health Association, November 2004

ID: 224

Cultural Views, Language Ability, and Regular Mammography Use in Chinese American Women Wenchi Liang, PhD; Judy H Wang, PhD; Mei-Yuh Chen, MS; Jeanne S Mandelblatt, MD, MPH

BACKGROUND: Breast cancer is the most common cancer and causes most of the cancer death among Chinese American women. Although breast cancer screening rates have been increasing over time, regular use of mammography is still low. Physician recommendations and access barriers, such as insurance coverage and lack of transportation, have been shown to affect use of mammography. Since most of the older Chinese American women are immigrants, cultural views and English proficiency are likely to influence their mammography use.

PURPOSE: To examine whether Chinese cultural views and language ability influence regular mammography use among Chinese American women.

METHODS: A total of 335 Chinese American women aged 50 and older recruited from Chinese churches, senior centers, and organizations completed telephone interview. Cultural views were measured by a 9-item sum score about fatalism and a 2-item sum score about self-care. English ability was measured by a sum score of 4 items assessing the ability to read, write, listen to, and speak English. Other potential factors included physician recommendation, family/friend encouragement, health insurance, access barrier, and perceived risk of and worry about getting breast cancer. Regular screeners were defined as having had two mammograms at age-appropriate intervals. Logistic regressions were used to compare the relative influence of these factors in regular mammography use.

RESULTS: Besides having health insurance and physician recommendation and expressing worry about getting breast cancer, women who reported a fatalistic view about health and cancer, had low English proficiency, and emphasized self-care over medical checkups were less likely to get regular mammography.

IMPILICATIONS: Cultural views and language barrier contribute to Chinese women's failure to obtain regular mammograms. Health education programs and physicians should acknowledge and address Chinese women├ s cultural barriers and provide adequate language assistance in order to improve their screening adherence.

Cultural and Attitudinal Barriers to Colorectal Cancer Screening in Chinese American Women

Wang JH, Liang W, Cullen J, Chen M, Feng S, Yi B, and Mandelblatt J.
Cancer Control Program, Lombardi Comprehensive Cancer Center, Georgetown University

Background: Colorectal cancer (CRC) is the second most common cancer for Chinese-American women. Chinese-American women are more likely to be diagnosed with late stage CRC than white and other minority groups and experience multiple barriers to early detection.

Rationale: There is a paucity of research on how culture and perceptions of risk affect Chinese women's participation in CRC screening.

Purpose: This cross-sectional study was designed to measure associations between CRC screening behavior and cultural factors in Chinese women.

Methods: To date, a community-based sample of 335 women aged 50 and over recruited from Chinese churches and community events in the Washington DC area have completed a one-hour telephone interview.

Measures: Women were defined as having current screening if they reported a FOBT within 1 year, sigmoidoscopy within 5 years, or colonoscopy within 10 years. Women ever having these tests, but outside of these intervals, were considered non-current screeners. Women without any testing were considered never screeners. Chinese perspectives on cancer were assessed using previously developed scales. Generalized logit models were used to assess associations between the screening group and cultural views.

Results: 58% of women reported current screening, 19% non-current screening, and 23% had never been screened. Women with higher fatalism scores were significantly more likely to be non-current (vs. current) screeners than women with lower scores, controlling for covariates. Women who felt at lower risk of getting CRC were more likely to be non-current or never screeners (vs. current) (OR 1.39 95%CI 1.03-1.89 and OR 1.48 (1.07-2.06), respectively) than women who felt at higher risk.

Implications: Our preliminary results suggest that culturally based factors affect screening behaviors. Culturally tailored interventions may be needed to decrease barriers to Chinese women's participation in colorectal cancer screening.

Appendix E

Manuscript: Influence of culture and cancer worry on colorectal cancer screening in Chinese women

Running head: Culture and Colorectal Cancer Screening

Influence of Culture and Cancer Worry on Colorectal Cancer Screening among Older Chinese-American Women

Wang JH, PhD; Liang W, DDS, PhD; Chen, MY, MS; Cullen J, MPH, PhD; Yi B, MD; Schwartz MD, PhD; Mandelblatt JS, MD, MPH.

WJH, LW, CMY, CJ, YB, SMD, MJS (Cancer Control Program, Lombardi Comprehensive Cancer Center, Georgetown University Medical Center).

Corresponding Author:
Judy Wang, Ph.D.
2233 Wisconsin Avenue, N.W. Suite 440
Washington, DC 20007
Work: (202) 687-6306
Fax: (202) 687-0305
Email: jw235@georgetown.edu

Word Count = 4,070 words

Date of Submission: August 30, 2004

Abstract

Objectives: This study investigated the hypothesis that adherence to colorectal cancer screening guidelines among Chinese women was associated with eastern cultural views and worry about developing colorectal cancer. **Design**: Cross-sectional data from a community-based longitudinal study was used to examine the hypothesis of this study. Measures of sociodemographics, medical access factors, cultural views of healthcare, cancer worry, and practices of colorectal cancer screening were administered by a computer assisted telephone interview. **Participants**: Four hundred and thirty-three Chinese American women without a history of colorectal cancer and at ages of 50 and older from Metropolitan Washington DC in the U.S.A. completed the telephone interview. **Main outcome measure**: Adherence to utilization of either FOBT within a year, sigmoidoscopy within five years, or colonoscopy within ten years was used to define two outcome categories: current screeners and non-current screeners. **Results**: Controlling for covariates, this study found that 1) women with every 10 point increase in eastern cultural scale score were 25% less likely to be a current screener; 2) women who thought about the chance of getting colorectal cancer had about threefold greater odds of current screening than women who never thought about colorectal cancer; and 3) women receiving physician recommendation for colorectal cancer screening had more than a three-fold increased odds of being a current screener than women not receiving. **Conclusions**: Besides lack of physician recommendation, older Chinese women face cultural and psychological barriers to obtain timely colorectal cancer screening. These barriers may be reduced through culturally sensitive intervention studies.

Key words: Cultural views of healthcare, Colorectal cancer screening, Chinese-American women, FOBT, Sigmoidoscopy, Colonoscopy, Cancer worry, Physician recommendation

Introduction

Colorectal cancer is the second most common cancer and the third leading cause of cancer death for Chinese-Americans. Chinese Americans, the largest group of Asian Americans in the U.S., have higher colorectal cancer mortality rates than non-Hispanic Whites[1] and are more likely to be diagnosed with late stage colorectal cancer than Japanese and White women.[2] Despite this disease burden, there is a paucity of research on Chinese Americans' colorectal cancer screening practices.

In 2001, general U.S. self-reported colorectal cancer screening rates (including use of fecal occult blood test (FOBT), sigmoidoscopy, or colonoscopy) were 45–48%.[3] In contrast, only 22-31% of Chinese women report ever having had FOBT[4] and sigmoidoscopy[5] and just 38-42% report an FOBT in the past year.[4-5] These data are consistent with previous data indicating that Chinese women also underutilize breast and cervical cancer screening.[6-7]

Lower rates of cancer screening in Chinese women may be the result of several unique cultural and psychosocial barriers, beyond common barriers such as lack of health care resources and physician recommendation.[4,6-14] For instance, unlike western medicine, traditional Chinese medicine emphasizes the use of natural approaches (e.g. herbs medicine and balanced food).[15-17] In Chinese and other Asian cultures, cancer is viewed as an unpreventable and fatal disease.[8,18] Older Chinese women believe that thoughts about cancer may eventually cause cancer.[17,19] Chinese women also generally perceive themselves to be at lower risk of developing cancers compared to Caucasian women.[10,17] Given such beliefs, it is plausible that Chinese-American women who hold eastern cultural views may be disinclined to obtain colorectal cancer screening.

This community-based study was designed to evaluate cross-sectional associations between Chinese-American women's cultural views of care, worry about cancer, and use of

colorectal cancer screening tests. We hypothesized that women who had more western cultural views would be more likely to report being adherent to colorectal cancer screening than women with more eastern views after considering other factors. In addition, consistent with research on breast cancer screening,[20-22] we hypothesized that colorectal cancer worry would be associated with screening adherence.

Methods

Setting and Recruitment

This report is part of a larger study investigating the impact of cultural beliefs on cancer screening in Chinese-American women. The Georgetown University Institutional Review Board has approved this study. Chinese women were recruited from the Washington DC metropolitan area (the District of Columbia, Fairfax County in Virginia, and Montgomery and Prince George's Counties in Maryland).

With support from local Chinese community leaders, the researchers attended various community settings such as Chinese cultural service centers, senior centers, Chinese and Taiwanese associations, health fairs, churches, and Chinese New Year Celebrations to introduce this study. Chinese-language recruitment flyers were distributed at these events. Recruitment notices were also posted in Chinese newspapers and Chinese associations' newsletters and web sites. After public announcements, women were approached to evaluate eligibility and interest in participation. Women who were not U.S. residents and were younger than 50 years of age (exclusion criterion from parent study) were excluded from the project. Eligible women were invited to participate and were told again about the purpose, procedures, benefits and risks of participating in this study. Participants were offered incentives such as a bottle of multivitamin supplement and periodical health-related newsletters after enrolling.

Overall, 573 eligible Chinese women expressed interest in participation. Of the 573, 509 (89%) consented to participate. Seventy-four percent of the participants were recruited on site in Chinese churches, health fairs, senior centers, and Chinese associations' events held at restaurants; 16% were referred by friends; 8% brought consent forms home from the recruitment sites and mailed these back; and 2% called to enroll after learning of the study through notices in newsletters and newspapers.

Of the 509 consenting women, 438 (86%) completed the interview, 6% declined the interview, and 8% were pending contact at the time of the present analyses. Reasons provided for declining the interview after initially consenting included being no longer interested in participation (n =15), moving out of the area (n = 7), lost contact (n = 4), too busy (n = 3), and negative feelings about questions on cancer (n = 3). Of the 438 women who completed the interview, five reported a personal history of colorectal cancer and were eliminated from analyses. Thus, the final sample for this report was 433 women.

Data collection

A structured telephone interview was used to collect information regarding practices of FOBT, sigmoidoscopy, and colonoscopy, cultural views about health care and western medicine, presence of physician recommendation, worry about getting colorectal cancer, and socio-demographics. All survey questions were translated into Chinese written languages commonly used in China, Hong Kong, and Taiwan. Bilingual speakers (English and Chinese) translated the instrument and back-translation was conducted to assure accuracy. Trained interviewers speaking Mandarin, Taiwanese, or Cantonese conducted computer assisted telephone interviews with consenting women. Only three participants chose to complete the interview in English.

Eighteen participants who had difficulty in answering questions by telephone were interviewed in person. The interview took one hour on average.

Measures

Outcome variable. Utilization of colorectal cancer screening was our primary outcome. According to clinical guidelines endorsed by American Cancer Society, asymptomatic and average-risk adults aged 50 and older should obtain either yearly FOBT, sigmoidoscopy every five years, or colonoscopy every ten years.[3] We measured Chinese women's adherence to these guidelines with a series of questions. First, participants responded to separate questions about whether they had ever had FOBT, sigmoidoscopy, or colonoscopy. Women who reported having ever had a particular test were queried about when they had their most recent test. For FOBT, choices of screening intervals ranged from within one year, one to two years, more than two years. The intervals for sigmoidoscopy were from within one year, less than or about five years, and beyond five years. The timing of the most recent colonoscopy was either within or over 10 years. Women could also respond to the choice--don't know or unsure--if they did not remember when they went for the test.

Based on answers to these questions, colorectal cancer screening outcomes were divided into two levels: current and non-current. Current screeners were defined as having either FOBT within a year, sigmoidoscopy within five years, or colonoscopy within ten years. Non-current screeners were women who had either not had any of the three tests within the recommended screening interval or had not ever had one of the tests.

Predictor variables

Cultural views of healthcare. Based on previous focus group data from Chinese-American women, [19] we developed a scale to measure Chinese women's cultural views about

cancer and health care. The scale consisted of 30 items designed to measure the use of herbs, values of western medicine, fatalistic views of cancer, life styles, modesty, feelings about western medical examinations, other cultural ways of care (e.g. practices of Qi-kung or Tai-Chi), and traditional beliefs in hot-cold balance (hot-cold balance refers to beliefs about the nature of food containing two general characteristics: hot and cold. By balancing hot and cold foods inner energy balance, which is thought to be critical to maintaining health, can be achieved). For each item, women responded using a five-point Likert scale from *strongly agree* to *strongly disagree.* The inter-item reliability was .80.

Cancer worry. We assessed cancer worry with two items from previous research.[23] Explicit worry was measured with the item: "Overall, how worried are you that you might get colorectal cancer someday? 1 = not worried, 2 = somewhat, 3 = worried, and 4 = very worried. Thoughts about cancer were assessed by the item: "During last year, how often have you thought about your own chances of getting colorectal cancer? 1 = not at all or rarely, 2 = sometimes, 3 = often, and 4 = a lot."

Based on the distribution of responses, each of these variables was dichotomized: not worried vs. any worry (somewhat, worried, and very worried), and not thinking about getting colorectal cancer vs. thinking about it (sometimes, often, a lot). "Worry" and "thoughts" were each analyzed separately to examine their unique effect on screening.

Covariates

Sociodemographics. We assessed age (50 - 64 vs. 65+), educational level (≤ High school vs. > High school), marital (currently married vs. not married) and employment status (yes vs. no), and annual income. Annual income was subsequently excluded from the analysis because the variable had greater than 30% missing values.

Medical access factors. We also assessed medical access factors such as having health insurance (do you have any health insurance coverage? Yes/No), presence of a regular physician (when you are sick, do you have a regular doctor that you would go to look for? Yes/No), and physician recommendation (in the past two year, did any doctor who you have visited recommend that you have colorectal cancer screening? Yes/No).

Symptoms: Participants were asked "did you go for your last FOBT (or sigmoidoscopy, or colonoscopy) because of health reasons or as part of a routine checkup?" Of the 433 women, about 19% (N = 84) reported that they underwent one or more of these tests for health reasons. Given the imprecision of this measure, we decided to take a conservative approach in which we created a binary symptom variable (asymptomatic vs. symptomatic). Asymptomatic women included ever screened women who reported the receipt of screening as a result of routine checkups, and never screened women who said that they were healthy and had no physical symptoms. Symptomatic refers to women who received colorectal cancer screening as a result of health reasons. For some of the never screened women who had never heard about any of the screening tests and did not claim that they were healthy, we coded them as probably symptomatic and assigned them to the symptomatic category.

Data analysis

Bivariate and multivariate analyses were conducted to test the two study hypotheses. Missing data from the cultural scale were imputed with a mean substitution. Scores on each cultural item were summed to yield an overall Chinese cultural view score. We normalized the cultural sum scores from 0-100 points for the convenience of interpretation. Missing binary variables were imputed using a principle by which the missing cases were placed in the category when its odds of predicting a criterion are closer to 1. That is, the missing was placed in the

category that would decrease the association between the imputed variable and the outcome variable to avoid an artifact of overestimating the association.

To examine bivariate associations between screening and predictors, we used chi-square tests for dichotomous variables and t tests for continuous variables. Multivariate modeling of the effects of cultural views and cancer worry on colorectal cancer screening was conducted using logistic regression with hierarchical variable entry. Bivariate variables with statistically significant associations with screening outcomes were included in the multivariate model. In the logistic models, we employed a hierarchical variable entry approach in which we retained the significant predictors (p value <.05) from each tested model and added the next set of predictors to the subsequent models. In model 1, we entered demographic variables including education and employment status. In model 2, we retained significant variables from model 1 and then entered medical access factors (health insurance, presence of a regular doctor, and physician recommendation for colorectal cancer screening). Model 3 included all significant variables from model 2 plus the symptom variable. Based on a clinical point of view, the symptom variable was controlled for in the following models regardless its significance. In the fourth model, we retained significant variables and the symptom variable from model 3 and added colorectal cancer worry and thoughts about colorectal cancer. To examine whether cultural views about health care explain variance in colorectal cancer screening outcomes after adjustment for covariates examined in model 4, the variable of culture was the last predictor entered in the final model. Odd ratios (OR) with 95% confidence intervals (CI) were used to estimate the significance of the odds of current screening versus noncurrent screening for each study variable. The assessment of significance of blocks of variables entered in each step was based on estimation of differences in the likelihood ratio chi-square (χ^2) and degree of freedom

(*df*) between two evaluated models. The SAS 9.0 version statistical program was used to perform all analyses.

Results

Sample characteristics

Of the 433 participants, 432 were foreign born. Among the foreign born women, sixty percent were born in China, 3% in Hong Kong, 31% in Taiwan, and 6% in other countries including Singapore and Vietnam. The mean age of the sample was 64 years, ranging from 50 to 89 (standard deviation, SD = 9 years). The majority of participants had a college degree or higher (71%), had health insurance (81%), and were married (73%). Thirty-nine percent were employed. Fifty-seven percent (n = 246) of the participants were classified as current screeners and 43% (n = 187) were non-current screeners.

Bivariate analyses

Table 1 presents bivariate associations between sociodemographics, medical access factors, cancer worry, and cultural variables with colorectal cancer screening behavior. Among the sociodemographic variables, education and employment status were both associated with screening adherence. In terms of medical access factors, presence of a regular doctor, health insurance, and physician screening recommendation were each significantly associated with screening adherence. The presence of symptoms was also associated with being a current screener. Among the psychosocial and cultural variables, worry and thoughts about colorectal cancer were associated with an increased likelihood of being a current screener. In addition, current screeners had significantly lower mean scores on Chinese cultural views than non-current screeners, indicating that non-current screeners had a higher eastern view of care.

Multivariate analyses

As displayed in Table 2, we tested our hypotheses that culture and cancer worry independently predict colorectal cancer screening using logistic regression analysis in which we controlled for other study covariates. Based on bivariate analyses, education and employment status were considered in model 1 as sociodemographic predictors. In this model, education significantly predicted adherence ($p < .0001$), but employment status did not ($p = 0.31$). In model 2, we retained education and added medical access factors of health insurance, presence of a regular physician, and physician recommendation. In model 2, education ($p = .0017$) and physician recommendation ($p < .0001$) were independent predictors of screening. Removing the non-significant medical factors of health insurance ($p = 0.21$) and presence of a regular physician ($p = 0.14$) from model 2 resulted in a significant improvement in the model chi-square ($\Delta\chi^2$ (2) = 7.53, $P < .01$).

In model three we added our symptom variable to the variables retained from model 2 (education and physician recommendation). Although symptoms were not independently associated with screening adherence ($p = 0.13$), we felt that the clinical significance of this variable merited including it in all subsequent models. With symptoms in the model, both education and physician recommendation remained statistically significant. On the next step, we entered psychological factors (worry and thoughts about colorectal cancer) controlling for study variables retained in model 3. Thoughts about colorectal cancer exhibited a significant independent effect on colorectal cancer screening adherence ($p = .0081$), but worry was not independently associated with screening ($p = 0.1593$). Removing worry from the model did not result in a significant change in chi-square ($\Delta\chi^2$ (1) = 1.98, $P > .05$). Thus, worry was excluded in the fourth model.

In the fifth model we entered the cultural scale score. Culture was marginally predictive of screening adherence ($p = .0597$) after controlling for prior variables. Importantly, upon entry of cultural scale score, education was no longer independently associated with screening outcomes ($p = .088$), but symptoms became a significant independent predictor ($p = .0371$). Physician recommendation and thoughts about colorectal cancer both remained significant predictors of screening adherence.

Given the apparent confounding of the education, symptom and culture variables in the fifth model, we conducted follow-up analyses to explore these associations. We found that culture was highly and negatively correlated with education ($r = -.41$, $p < .0001$), indicating that women who had higher educational level were less likely to hold an eastern view of care. Given the high overlap between culture and education, we tested a final model identical to the fifth model above – but dropping education and retaining culture. In this final model, culture ($p = .006$) significantly and independently predicted colorectal cancer screening outcomes (controlling for physician recommendation, symptoms, and thoughts about colorectal cancer). The model chi-square was not significantly changed when education was removed from the model ($\Delta\chi^2 (1) = 2.9$, $P > .05$). No interaction effect between culture and other independent variables was found.

The results of the final logistic model (Table 2) suggest that women who received a physician recommendation for colorectal cancer screening had more than a three-fold increased odds of being a current screener compared to women who had not received a physician recommendation (OR, 3.44; 95% CI 2.25 to 5.28). Women who sometimes or often thought about the chance of getting colorectal cancer had about a threefold greater odds of current screening compared to women never thought about colorectal cancer (OR, 2.79; 95% CI 1.63 to

4.77). Finally, a 10-point increase in eastern cultural view was associated with a 25% decreased likelihood of being a current screener (OR, 0.75; 95% CI 0.74 to 0.76).

Finally, we conducted a stratified analysis to examine to the degree of confounding between education and cultural views. As shown in Table 3, cultural view was not associated with screening among college-educated participants. However, among participants with less education, those who were not current screeners had a more eastern cultural view than did those who were current screeners.

Discussion

The results of this study support our hypotheses that cultural views and thoughts about getting colorectal cancer were significantly and independently associated with adherence to colorectal cancer screening guidelines in Chinese women after controlling for demographic and medical access variables. Consistent with previous research on cancer screening in Chinese women,[4,7] our study also confirmed that physician recommendation was strongly predictive of screening adherence, independent of other predictors.

Chinese women holding an eastern view of care are less likely to adhere to colorectal cancer screening guidelines than Chinese women with a more western view of care. An eastern view of care consists of several cultural aspects commonly found among Chinese women such as fatalism, use of herb medicine, hot –cold balance, attitudes toward both physician visits and western examination, modesty, and life styles (i.e. healthy diet and balanced emotion). These cultural beliefs may impede Chinese women's adherence to colorectal cancer screening guidelines.

We found that the degree of beliefs in the eastern way of care was strongly related to a woman's educational level. Chinese women with lower educational levels were significantly

more likely to hold an eastern view of care and were less likely to adhere to colorectal cancer screening guidelines than Chinese women with post-secondary education. These data suggest that cultural concept of health care may be modified by an individual's educational experience. Higher education in modern Chinese society has been greatly influenced by western science and technology. Chinese-American women with advanced education, especially those who completed their postsecondary education in the U.S., are more likely to be influenced by western culture and have more opportunities to learn about western medical care. With an understanding of western preventive care, diagnosis, and treatment, college-educated Chinese women may be more likely to modify their existing eastern care structure, utilize western medical services, and follow its preventive guidelines than high school-educated Chinese women.

Although an eastern view of care was associated with decreased screening adherence, we found that this association was only present among less educated participants. In post hoc analysis among college-educated women, adherence to screening was significantly related to physician recommendation and colorectal cancer awareness (data not shown). These results suggest that efforts to target Chinese women for colorectal cancer screening will need to consider both their cultural perspectives and educational backgrounds.

Similar to other research on minority populations,[24-27] results of this study suggest that physician recommendation was an independent predictor of colorectal cancer screening in Chinese women regardless of cultural view of care. Chinese culture regards physicians as authority figures.[28] Chinese women who hold an eastern view of care and use less western medical care may be least likely to be exposed to professional recommendation for colorectal cancer screening. However, our data suggests that when a recommendation is received, it is typically acted upon regardless of the whether the individual has an eastern or western view of

care. It is likely that physicians who are enthusiastic about encouraging patients to obtain timely colorectal cancer screening may explain the importance and benefits of screening to their patients. Chinese women's misconceptions about colorectal cancer and screening may be clarified at this time. This may help Chinese women adapt themselves to western ways of care by placing more value on western preventive care, which consequently motivates them to comply with screening guidelines.

We also found that women who worried about developing colorectal cancer were more likely to obtain timely colorectal cancer screening than women who were not worried. Similar to previous studies in other ethnic groups,[29-30] apprehension about having colorectal cancer was significantly associated with Chinese women's colorectal cancer screening behavior. These data are also consistent with studies of examining the role of worry on other forms of cancer screening.[20,22,31] Moreover, thoughts about the chances of getting colorectal cancer appear to be a stronger predictor in the multivariate analyses than explicit worry. It is possible that thoughts about colorectal cancer represent awareness of the threat. Thus, patients who are aware of the threat may be more likely to seek screening. Our current cross-sectional data cannot specify the cause and effect between thoughts about colorectal cancer and screening behavior. However, prior research by others indicates that emotional factors, such as worry and fear, can facilitate women's behavioral responses to cancer screening and regulate screening behavior in different ethnic groups.[32,33]

There are several caveats that should be considered in interpreting our results. First, this study was based on a community-based convenience sample. The sample was extremely well educated and insured. There may be unique barriers to colorectal cancer screening for less-educated and uninsured women. Second, this sample was virtually all foreign-born limiting the

study's generalizability to other groups of Chinese. It is likely that American-born or more culturally assimilated Chinese Americans would report different cultural views and would have different rates of colorectal cancer screening. Third, results are based on self-report data at one time point. Whether or not significant barriers found in this study are contributing to Chinese Americans' adherence to colorectal cancer screening needs to be prospectively studied. Finally, our measure of whether participants were symptomatic or not are imperfect. We attempted to distinguish women who sought true screening from those who whose CRC tests were diagnostic in nature. However, since we based this distinction on a self-report measure, it remains unclear whether the tests reported by these participants were screening or diagnostic tests. However, we chose to include these women in the analyses and control for the variable of symptoms in the multivariate modeling. Future investigation should more clearly assess whether the tests were obtained for screening or diagnostic reasons.

The current study suggests that professional recommendations are important avenues in overcoming Chinese American women's cultural and psychological barriers to colorectal cancer screening. It is notable that most of the older Chinese women eligible for this study are immigrants. Chinese immigrating to the U.S. have a 2 to 4-fold increased risk of developing colorectal cancer compared to those living in China.[33] When these women are less educated about western preventive care and are unaware of their increased risk of getting colorectal cancer, they are less likely to adhere to screening guidelines. Reports based upon 1990 and 2000 census data indicate that about 69% of Chinese Americans are foreign born and this population is rapidly growing.[34-35] A study comparing SEER data from 1975-1987 and from 1988-1997 indicated that Chinese Americans had lower five-year colorectal cancer survival rates than other Asian groups in the U.S.[36] Participation in regular colorectal cancer screening is critical to early

detection and morality reduction.[37-39] Reducing barriers in Chinese women and promoting their use of colorectal cancer screening may depend on culturally and linguistically appropriate intervention programs. Very few intervention studies have been designed to counteract Chinese women's psychological and cultural barriers. Our results suggest that interventions directed toward increasing colorectal cancer awareness and knowledge about western preventive care through physician recommendations are important to enhance Chinese-American women's adherence to colorectal cancer screening.

Acknowledgements

This work was supported by funding from Breast Cancer Research Training Grant by the Department of Defense (Judy Wang), the National Cancer Institute K07 (Wenchi Liang), the National Cancer Institute Grant KO5 (Jeanne S. Mandelblatt), and the Cancer Clinical and Economic Outcomes Core Shared Resource at Lombardi Comprehensive Cancer Center.

References

1. Luo RL, Freeman J, Freeman D, Weaver J. A population based study in colorectal cancer survival among non-Hispanic Whites and Asian American subgroups [Abstract]. *ICC2004.* 2004; The 9th Biennial Symposium on Minorities, the Medically Underserved, & Cancer Program Syllabus:58. Abstract 125.

2. Lin SS, Clarke CA, Prehn AW, Glaser SL, West DW, O'Malley CD. Survival differences among Asian subpopulations in the United States after prostate, colorectal, breast, and cervical carcinomas. *Cancer.* 2002;94:1175-1182.

3. Centers for Disease Control. Behavioral Risk Factor Surveillance System. Accessed July 2004. Available from: http://www.cdc.gov/brfss/

4. Tang TS, Solomon LJ, McCracken LM. Barriers to fecal occult blood testing and Sigmoidoscopy among older Chinese-American women. *Cancer Pract.* 2001;9(6):277-282.

5. Sun WY, Basch CE, Wolf RL, Li XJ. Factors associated with colorectal cancer screening among Chinese-Americans. *Prev Med.* 2004;39:323-329.

6. Tang TS, Solomon LJ, McCracken LM. Cultural barriers to mammography, clinical breast exam, and breast self-exam among Chinese-American women 60 and older. *Prev Med.* 2000;31:575-583.

7. Tu, SP, Yasui Y, Kuniyuki AA, Schwartz SM, Jackson JC, Hislop TG, Taylor V. Mammography screening among Chinese-American women. *Cancer.* 2003;97:1293-1302.

8. Yu, MY, Hong OS, Seetoo AD. Uncovering factors contributing to under-utilization of breast cancer screening by Chinese and Korean women living in the United States. *Ethn Dis.* 2003;13:213-219.

9. Yu MY, Seetoo AD, Hong OS, Song L, Raizade R, Agas Weller AL. Cancer screening

promotion among medically underserved Asian American women: integration of research and practice. *Res Theory Nurs Pract.* 2002;16(4):237-248.

10. Hoeman SP, Ku YL, Ohl DR. Health beliefs and early detection among Chinese women. *West J Nurs Res.* 1996;18(5):518-533.

11. Kagawa-Singer M. Cancer and Asian American cultures. *Asian Am Pac Island J Health.* 1998;6(2):383-399.

12. Sent L, Ballem P, Paluck E, Yelland L, Vogel AM. The Asian women's health clinic: addressing cultural barriers to preventive health care. *JAMC.* 1998;159(4):350-354.

13. Tang TS, Solomon LJ, Yeh CJ, Worden JK. The role of cultural variables in breast self-examination and cervical cancer screening behavior in young Asian women living in the United States. *J Behav Med.* 1999;22(5):419-436.

14. Au C. Cultural factors in preventive care: Asian-Americans. *Prim Care Clin Office Pract.* 2002;29:495-502.

15. Chen YLD. Conformity with nature: a theory of Chinese American elders' health promotion and illness prevention processes. *Adv Nurs Sci.* 1996;19(2):17-26.

16. Ma GX. Between two worlds: the use of traditional and western health services by Chinese immigrants. *J Comm Health.* 1999;24(6):421-437.

17. Facione N, Giancarlo C, Chan L. Perceived risk and help-seeking behavior for breast cancer: a Chinese-American perspective. *Cancer Nurs.* 2000;23(4):258-267.

18. Straughan PT, Seow A. Attitudes as barriers in breast screening: a prospective study among Singapore women. *Soc Sci Med.* 2000;51:1695-703.

19. Liang W, Yuan E, Mandelblatt JS, Pasick RJ. How do older Chinese women view health and cancer screening? Results from focus groups and implications for interventions. *Ethnicity and*

Health. 2004;9(3): 283-304.

20. Schwartz MD, Taylor KL, Willard KS. Prospective association between distress and mammography utilization among women with a family history of breast cancer. *J Behav Med.* 2003;26(2):105-117.

21. Andersen MR, Smith R, Meischke H, Bowen D, Urban N. Breast cancer worry and mammography use by women with and without a family history in a population-based sample. *Cancer Epidemiol Biomarkers Prev.* 2003;12(4):314-320.

22. Diefenbach MA, Miller SM, Daly MB. Specific worry about breast cancer predicts mammography use in women at risk for breast and ovarian cancer. *Health Psychol.* 1999;18(5):532-536.

23. Schwartz M, Lerman C, Daly M, Audrain J, Masny A, Griffith K. Utilization of ovarian cancer screening by women at increased risk. *Cancer Epidemiol Biomarkers Prev.* 1995;4:269-273.

24. O'Malley AS, Beaton E, Yabroff KR, Abramson R, Mandelblatt J. Patient and provider barriers to colorectal cancer screening in the primary care safety-net. *Prev Med.* 2004;39:56-63.

25. Brenes GA, Paskett ED. Predictors of stage of adoption for colorectal cancer screening. *Prev Med.* 2000;31:410-416.

26. Honda K. Factors associated with colorectal cancer screening among the US urban Japanese population. *Am J Pub Health.* 2004;94(5):815-822.

27. Austin LT, Ahmad F, McNally MJ, Stewart DE. Breast and cervical cancer screening in Hispanic women: a literature review using the health belief model. *Womens Health Issues.* 2002;12(3):122-128.

28. Ferketich A, Wewers ME, Kwong K, Louie E, Moeschberger M, Tso A, Chen M Jr.

Smoking cessation interventions among Chinese Americans: the role of families, physicians, and the media. *Nicotine Tob Res.* 2004;6(2):241-248.

29. Friedman LC, Webb JA, Richards S, Plon SE. Psychological and behavioral factors associated with colorectal cancer screening among Ashkenazim. *Prev Med.* 1999; 29:119-125.

30. Myers RE, Vernon SW, Tilley BC, Lu M, Watts BG. Intention to screen for colorectal cancer among white male employees. *Prev Med.* 1998;27:279-287.

31. Cohen L, Fouladi RT, Babaian RJ., et al. Cancer worry is associated with abnormal prostate-specific antigen levels in men participating in a community screening. *Cancer Epidemiol Biomarkers Prev.* 2003; 12 (7): 610-7

32. Consedine NS, Magai C, Krivoshekova YS, et al. Fear, anxiety, worry, and breast cancer screening behavior: A critical review. *Cancer Epidemiol Biomarkers Prev.* 2004; 13(4): 501-10.

33. Consedine NS, Magai C, Neugut, AI. The contribution of emotional characteristics to breast cancer screening among women from six ethnic groups. *Prev Med.* 2004; 38(1): 64-77.

33. Whittemore AS, Wu-Williams AH, Lee M, et al. Diet, physical activity, and colorectal cancer among Chinese in North America and China. *J Natl Cancer Inst.* 1990;82(11):915-26.

34. US Dept of Commerce. We the Americans: Asians. 1993. Economics and Statistics Administration, Bureau of the Census.

35. US Dept of Commerce. The Asian population: 2000. 2002. Economics and Statistics Administration, Bureau of the Census. Available [online]: http://www.census.gov/population/www/cen2000/briefs.html

36. Gomez SL, Clarke CA, Glaser S. Cancer survival in US racial/ethnic groups: heterogeneity among Asian ethnic subgroups. *Arch Intern Med.* 2003;163(5):631-632.

37. Selby JV, Friedman GD, Quesenberry CP Jr, Weiss NS. A case-control study of screening

sigmoidoscopy and mortality from colorectal cancer. *N Engl J Med.* 1992;326(10):653-7.

38. Winawer SJ. Zauber AG, Ho, MN, et al. Prevention of colorectal cancer by colonoscopic polypectomy. *The New England J Med.* 1993; 329 (27): 1977-81.

39. Newcomb PA, Norfleet RG, Storer BE, Surawicz TS, Marcus PM. Screening sigmoidoscopy and colorectal cancer mortality. *J Natl Cancer Inst.* 1992;84(20):1572-5.

Table 1

Bivariate Association between Sociodemographics, Medical Care Resources, Cancer Worry and Cultural Variables with Screening Outcomes (N = 433)

Variables	Whole Group No.	Current screeners (n = 246) No.	%	Non-current screeners (n = 187) No.	%	*P* values
Age						.9625
50 to 64 years old	246	140	57	106	57	
≤ 65	187	106	43	81	43	
Education						<.0001
≤ High school	127	51	21	76	41	
> High school	306	195	79	111	59	
Martial status						.1026
Married	316	187	76	129	69	
Divorced/Widow/Single	117	59	24	58	31	
Employed						.0187
Yes	171	109	44	62	33	
No	262	137	56	125	67	
Presence of a regular doctor						<.0001
Yes	339	210	85	129	69	
No	94	36	15	58	31	
Health insurance						<.0001
Yes	349	215	87	134	72	
No	84	31	13	53	28	
Physician recommendation						<.0001
Yes	193	143	58	50	27	
No	240	103	42	137	73	
[a]Symptoms						.015
Yes	133	64	26	69	37	
No	300	182	74	118	63	
Worry about getting colorectal cancer						.0004
Somewhat/often/a lot	166	112	46	54	29	
Not at all	267	134	54	133	71	
Thinks about getting colorectal cancer						<.0001
Sometimes/often/a lot	97	72	29	25	13	
Not at all	336	174	71	162	87	
[b]Cultural views of healthcare		M = 52.08 (SD 9.46)		M = 56.18 (SD 11.06)		<.0001

Note. [a]Data about symptoms were based on women's self report rather than clinical information. [b]Cultural views are continuous scores ranging from 0 to 100 points. M = mean; SD = standard deviation. High scores on cultural views indicate a more eastern view of care; low scores reflect a more western view of care.

Table 2

Summary of Statistics of Logistic Regression Models Predicting Screening Behavior between Current and Noncurrent Screeners

Model construction	Estimated coefficient	OR	95%CI	Model χ^2	*df*	$\Delta^c\chi^2$ (vs. compared model)
Model 1				20.25	1	
Education: > High school (vs. ≤ High school)	0.96	2.62	1.71 – 4.00			
Model 2				55.00	2	34.75*** (vs. Model 1)
Education	0.77	2.15	1.38 – 3.35			
Physician recommendation: yes (vs. No)	1.23	3.41	2.25 – 5.19			
Model 3				57.32	3	2.32 (vs. Model 2)
Education	0.72	2.05	1.31 – 3.22			
Physician recommendation	1.22	3.37	2.22 – 5.13			
[a]Symptoms: Yes (vs. No)	0.35	1.41	0.91 – 2.20			
Model 4				71.64	4	14.32*** (vs. Model 3)
Education	0.62	1.86	1.17 – 2.94			
Physician recommendation	1.24	3.45	2.25 – 5.29			
Symptoms	0.45	1.57	1.00 – 2.48			
Thoughts about getting colorectal cancer: Somewhat/often/a lot (vs. No)	1.00	2.72	1.59 – 4.67			
Model 5 (Final model)				72.34	4	2.90 (vs. Model 5)
Physician recommendation	1.24	3.44	2.25 – 5.28			
Symptoms	0.55	1.74	1.10 – 2.73			
Thoughts about getting colorectal Cancer	1.03	2.79	1.63 – 4.77			
Cultural views	-.03	0.97	0.95 – 0.99			

Note. The reference group is current screeners. Non-significant covariates and predictors were not retained in each model except controlling for symptoms. This modified final model was significant at $p < .0001$, indicating a good fit to the data. [a]Data about symptoms were based on women's self report rather than clinical information. [b]Cultural views are continuous scores ranging from 0 to 100 points. High scores on cultural views indicate a more eastern view of care; low scores reflect a more western view of care. For every 1 point increase in the cultural scale, the odds of being current screeners were 3% less than being non-current screeners. [c]The symbol (Δ) denotes as the differences in likelihood ratio chi-square (χ^2) tests between the tested model and the compared model. * $p < .05$, *** $p < .001$

Table 3

Mean Differences in Cultural Views by Women with and without College Education

Groups \ Outcomes	Current Screeners			Non-current Screeners			
	Cultural views						
	n	M	SD	n	M	SD	t values
Level of education							
≤ High school	51	58.06	10.30	76	62.23	11.23	2.12*
> High school	195	50.51	8.58	111	52.04	8.84	1.48

Note. * $p < .05$. M = mean scores on the cultural scale. SD = standard deviation. Higher mean scores on cultural views mean a more eastern view of care. Low mean scores on cultural views mean a more western view of care.